

# Barriers to Wayfinding in Downtown Saint Paul: An Evaluation



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# Barriers to Wayfinding in Downtown St. Paul: An Evaluation

Humphrey School of Public Affairs Capstone Report

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Course: PA 8081: Capstone Workshop

Program Evaluation

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# Executive Summary

As the capital of Minnesota, St. Paul is known for its host of award-winning restaurants, the Mississippi riverfront, and large entertainment venues. Although the downtown area is easily walkable, our client, the CapitolRiver Council (CRC), has heard from residents, visitors, cultural institutions, and businesses alike that people sometimes struggle to figure out their way through the skyways or streets and that zoning requirements that prevent exterior signage may make parts of downtown seem confusing and desolate. This evaluation sought to understand the barriers to wayfinding present in downtown St. Paul so the CRC can better advocate for improvements to the system.

The evaluation was intended to answer the following questions:

- What are the **barriers for business owners** in trying to attract customers in downtown St. Paul?
- What are the **barriers for people in motor vehicles** trying to successfully navigate downtown St. Paul?
- What are the **barriers for pedestrians** trying to successfully navigate in downtown St. Paul?
- What are the **current wayfinding best practices**, and what is standing in the way of enacting these best practices in downtown St. Paul?

These questions were answered through a variety of research methodologies, including surveys, interviews, a review of literature, and a code comparison. The business owner survey yielded 68 responses with 5 follow-up interviews, and the residents and visitors survey had 320 responses. While the original intent was to receive a higher response rate, we believe that the patterns found throughout the various methodologies point towards common barriers, though additional research is needed to verify these findings.

## Conclusions

1. While the majority of St. Paul residents feel comfortable navigating downtown and using the signage there to get from one location to another, a significant minority note that there is an **overall lack of signage** in downtown St. Paul and that it **is inconsistent throughout the area**.
2. The St. Paul **pedestrian experience is particularly difficult to navigate**, due in part to the **confusing and inaccessible skyway system** as well as safety and accessibility concerns about the downtown area overall.
3. The **process of putting up signage is cumbersome for business owners** due to blanket restrictions of certain types of signage, subjective interpretations of the codes and what historic preservation means, and the lack of distinction between commercial and residential districts.
4. **The skyway system in particular is difficult** for business owners to put up signage, potentially due to gatekeeping by building owners or a lack of information in general.



5. Overall, St. Paul has some of the strictest signage codes compared to similar Midwestern cities, due in part to **blanket restrictions and permits** needed for almost all signage types.

## Recommendations

1. Conduct a more thorough and expansive **evaluation of the skyway experience** for both users and business owners in order to understand the barriers to wayfinding in the skyway and to craft solutions to the unique challenges of the skyway system.
2. Prior to installing new signage and designing a new wayfinding system, consider the other barriers to navigating downtown St. Paul, such as **safety, accessibility**, and a **lack of diversity** in perspectives.
3. Work towards **shortening and standardizing the process** through which business owners put up new signage. This can be done through a variety of suggested methods: requiring businesses to work with contractors in order to put up a new sign, working with local organizations to disseminate information, or changing specific codes to allow for more dynamic and exciting signage in business districts.

# Table of Contents

<b>Introduction</b>	<b>6</b>
Evaluation Purpose	6
<b>Methodology &amp; Design</b>	<b>6</b>
Research Questions	6
Surveys	7
Interviews	7
Code Comparison	8
Literature Review	8
<b>Results: Residents &amp; Visitors Survey</b>	<b>9</b>
Respondent Characteristics & Survey Validity	9
Ease of Navigation	10
Signage Ratings	11
Vehicular Directional Signage & Parking Signage	12
Pedestrian Directional Signage	14
Bike / Trail Signage	16
Difficult Locations	17
Conclusions	20
Recommendations	21
<b>Results: Business Owner Survey &amp; Interviews</b>	<b>21</b>
Respondents Characteristics & Survey Validity	21
Experience with the Zoning Board of Appeals	22
Experience with Heritage Preservation Commission	23
Satisfaction with Signage Code	24
Experience Putting Up Signage	25
Deciding Against Putting Up Signage	25
Interviews	26
Conclusions	27
Recommendations	28
<b>Results: Code Comparison &amp; Interview</b>	<b>29</b>
Informational Interview	31
Conclusions	32
Recommendations	32
<b>Results: Literature Review</b>	<b>33</b>
Wayfinding Design Principles	33
Post Occupancy Evaluation	33
Mobile Wayfinding Options	34

Case Studies of Other Cities	35
Conclusions	35
Recommendations	36
<b>Limitations &amp; Bias</b>	<b>36</b>
<b>Conclusion</b>	<b>37</b>
<b>Appendix A</b>	<b>38</b>
Survey Questions: Business Owners	38
Survey Questions: Residents & Visitors	43
Interview Questions	50
<b>Appendix B</b>	<b>51</b>
Object Description	51
Goals	51
Setting	51
Staffing	52
Participants	52
Activities	52
Budget	53
Logic Model	53
Design Matrix	54
Evaluation Design	55
Design Matrix Questions	55
Methodology	56
Limitations	56
Analysis Plan	57
Surveys	57
Interviews	58
Code Comparison	59
Literature Review	59
<b>References</b>	<b>61</b>

# Introduction

The CapitolRiver Council (CRC) is an advisory group to the St. Paul City Council that “represents and works in partnership with all District 17 stakeholders to act on urban planning and community building efforts as part of a shared vision to support sustainable, safe, healthy, and vibrant neighborhoods.” CRC members have received feedback from businesses, visitors, and residents that there are several challenges to wayfinding in the downtown St. Paul area. First-time visitors to museums or entertainment venues sometimes struggle to figure out their way through the skyways or streets to their destination, and zoning requirements that prevent certain types of exterior signage may make parts of downtown seem confusing and desolate.

## Evaluation Purpose

This evaluation sought to **better understand the barriers to wayfinding in downtown St. Paul**, which may impede the City from achieving its overarching goals of helping businesses recover and restoring downtown in the wake of COVID-19.

The intended outcome of this evaluation is the short-term outcome of a zoning study of the St. Paul Zoning Code Chapter 64 conducted by the city of St. Paul. This zoning study is the first step to potentially changing the current wayfinding system to better align with the city’s goals.

## Methodology & Design

This evaluation is a continuation of the Fall 2020 PA 5311 course that designed and partially implemented an evaluation plan of the downtown St. Paul wayfinding system. Our evaluation used mixed methods in order to understand the barriers to wayfinding for various groups of visitors, residents, and business owners in downtown St. Paul. These methods included: surveys, interviews, review of literature, and a code comparison. These mixed methods served to triangulate the data in order to give the CRC a more comprehensive understanding of the barriers to wayfinding.

## Research Questions

This evaluation sought to answer the following four research questions:

- What are the **barriers for business owners** in trying to attract customers in downtown St. Paul?
- What are the **barriers for people in motor vehicles** trying to successfully navigate in downtown St. Paul?
- What are the **barriers for pedestrians** trying to successfully navigate in downtown St. Paul?
- What are the **current wayfinding best practices**, and what is standing in the way of enacting these best practices in downtown St. Paul?

## Surveys

The primary method of gathering data for this evaluation was through administering surveys. We administered two surveys to two groups of relevant stakeholders: business owners and downtown St. Paul residents and visitors. The business owner survey was designed to gain insight into the challenges business owners face in creating and displaying signage in downtown St. Paul, and the resident and visitor survey sought to understand the barriers pedestrians, cyclists, and drivers face in navigating downtown St. Paul. The surveys consisted of **open-ended questions and Likert scale questions** in order to collect both quantitative and qualitative data. We conducted online surveys because they are a low-cost, high representative method to gain data from a wide variety of respondents in a relatively quick amount of time.

The business owner survey was distributed electronically via email to members of the St. Paul Chamber of Commerce, Visit St. Paul network, and to the St. Paul Downtown Alliance email list of business owners. The Downtown Alliance estimated that there are about 170 businesses in the downtown area. Given this number, we needed a sample size of about 120 respondents in order to ensure statistical significance. We originally intend to collect survey data over the course of two weeks, from February 22nd to March 8th. However, the initial two week period did not garner enough respondents, so we sent a follow-up email at the end of the two week period and kept the survey open for another week in order to collect more responses. We eventually closed the survey after three weeks, with 68 responses, in order to ensure we had enough time to analyze the data accordingly.

The resident survey was distributed electronically to members of the St. Paul Downtown Alliance and CRC email lists as well as the CRC and Humphrey School of Public Affairs Facebook pages. There are about 10,000 residents living in downtown St. Paul, so the goal sample size was approximately 370 respondents in order to ensure 95% confidence in the survey responses. Similar to the business owner survey, we intended to collect data over the course of two weeks, from February 22nd to March 8th. However, we did not reach the target sample size during the two week period, so we sent out a reminder email and kept the survey open for another week as well. We did not reach our goal sample size over the three-week period, and closed the survey at 320 responses.

After the survey data was collected, each evaluator cleaned one survey, eliminating duplicate responses, removing those who did not accurately complete the survey entirely, and ensuring that the business owner respondents have a business located within downtown St. Paul. In the results section of this report, we used **descriptive statistics to present common barriers** and themes that we identified from each survey. These statistics will give the CRC a swath of quantitative and qualitative data to potentially display the need for a zoning study.

## Interviews

In order to mitigate the bias from an online survey and gain a deeper understanding of barriers to wayfinding in the complex system, we also interviewed five business owners who responded to the online survey and indicated that they would like to sit for an interview. Because of the health and safety challenges present in today's pandemic, we conducted online interviews via Zoom in order to

keep the evaluation team and participants safe. Interviews were scheduled within three days of receiving the survey response, and all interviews were conducted within a week of receiving the survey response so the business owner was able to recall specific answers to the survey.

The purpose of the business owner interviews was to **triangulate the findings from the surveys** and give the evaluation team a more nuanced understanding of the barriers to wayfinding in downtown St. Paul for business owners. The qualitative data collected from these surveys complements the quantitative data, and gives the CRC more concrete examples of barriers specific to business owners.

After all of the interviews were conducted, we highlighted key themes and phrases present throughout the interviews. We then used these common themes to confirm the findings from the survey and to bolster the quantitative data with more concrete examples of the wayfinding barriers in downtown for business owners as they interact with the signage code.

## Code Comparison

While understanding the perspectives of businesses and pedestrians is important, we also recognize that analyzing the codes that bind these actors in a larger national context is equally important. Therefore, last semester the evaluation team built a data collection tool that measured the differences between St. Paul's signage zoning code and the signage zoning codes of four similar Midwestern cities, based on population sizes, demographics, climate, downtown area, historic districting, and business population: Minneapolis, Madison, Cincinnati, and Saint Louis. The analysis was based on the fact that organizations often use **external benchmarking** in order to compare its own performance to the performance of other similar organizations. This benchmarking allowed for the CRC to see irregularities in the St. Paul zoning that were not present in similar cities. Seeing as cities often look to similar cities in order to enact new policies and ordinances, this practice will provide the CRC with evidence to persuade the legislature to rethink specific codes.

## Literature Review

Similar to the code comparison conducted last semester, we also conducted a review of literature to determine the current best practices in wayfinding across the world. As we read through the literature, we highlighted themes and commonalities that arise across a variety of sources. After analyzing the survey and interview results, we compared the current wayfinding practices and pitfalls in St. Paul to those best wayfinding practices that we compiled. Because cities tend to look towards one another when implementing new policies or programs, this literature review will provide the CRC with a **detailed list of the ways in which other cities are designing wayfinding systems** that can act as a litmus test for St. Paul's own wayfinding system.

## Results: Residents & Visitors Survey

The following sections describe the results, conclusions, and recommendations for each of the four evaluation methods conducted. While the wayfinding system in downtown St. Paul is a complex system that needs to be studied in more depth, we believe these evaluation methods and subsequent results will give the CRC the necessary data and evidence to persuade the city to conduct a zoning study of the downtown area.

### Respondent Characteristics & Survey Validity

There were 320 respondents to the resident and visitor survey. While the goal sample size was 370 in order to ensure 95% confidence in the survey responses, this sample size ensures 90% confidence, which we believe is valid for generalizing the responses to the wider downtown St. Paul area. Among these respondents, 85% of them finished all the multiple choice and open-ended questions, while 15% of them did not finish the open-end questions or stopped before getting to the open-ended questions.

As figure 1 displays, the sample consisted largely of St. Paul residents, both those living downtown (70%) and outside downtown (19%). This is important to keep in mind as we discuss results, because the large majority of respondents are familiar with the downtown St. Paul area. Thus, we are unable to generalize the results to out-of-town visitors, because only 35 respondents lived outside of St. Paul. We believe the lack of St. Paul visitors is due in part to COVID-19 restrictions that limited tourists in St. Paul over the past year. As described above, we also sent the survey out via organizations that are located in St. Paul, so their email lists likely had more St. Paul residents than tourists. Additionally, the large majority of respondents were frequent downtown St. Paul visitors, coming to downtown more than once per month prior to COVID-19, as figure 2 displays. Once again, this is likely due to the fact that the surveys were sent to email lists of downtown St. Paul organizations and these respondents are therefore more likely to be interested in downtown St. Paul. We also intentionally did not ask demographic questions on the survey so as not to limit the number of respondents. **Therefore, our results primarily reflect the opinions of St. Paul residents, the majority of whom frequent downtown to visit local businesses, entertainment venues, parks and recreation areas, and work.**

Figure 1: Home Location of Respondents (%)

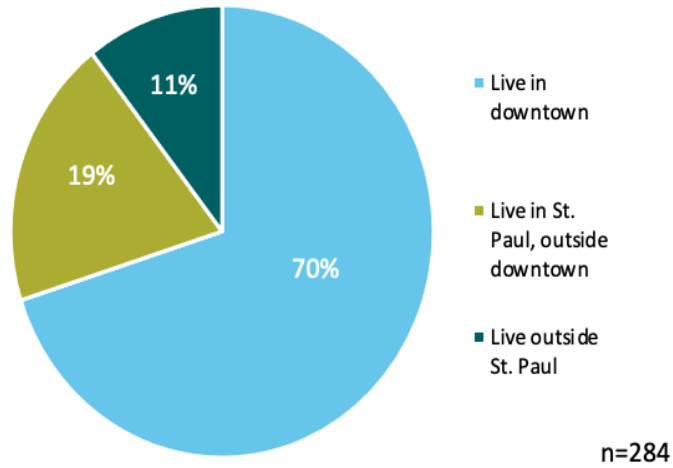
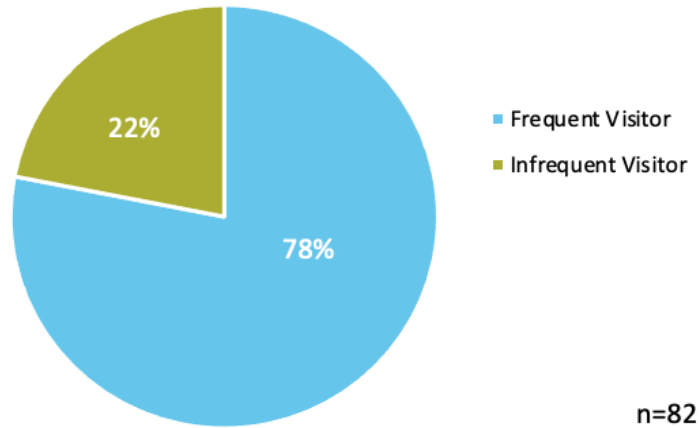


Figure 2: Frequency of Visiting Downtown St. Paul (%)



## Ease of Navigation

**Overall, downtown St. Paul residents are able to navigate the downtown space with relative ease.** Both frequent and infrequent walkers, bikers, drivers, and public transit users note that they find navigating downtown St. Paul relatively easy, as table 1 and 2 display. However, 24% of frequent users on average said that navigating downtown St. Paul through a host of different methods is either extremely or somewhat difficult, and 25% of infrequent users on average noted the same.

Table 1: Frequent Users' Ease of Navigation in Downtown St. Paul  
Percentages, by Mode of Navigation

Mode of Navigation	Extremely Difficult	Somewhat Difficult	Neither Difficult nor Easy	Somewhat Easy	Extremely Easy
Walking	1%	15%	14%	39%	31%
Biking	24%	28%	3%	28%	17%
Driving	0%	14%	23%	35%	28%
Public Transit	5%	10%	13%	38%	35%
Total Average for All Modes	7%	17%	13%	35%	28%



**Table 2: Infrequent Users' Ease of Navigation in Downtown St. Paul**  
Percentages, by Mode of Navigation

Mode of Navigation	Extremely Difficult	Somewhat Difficult	Neither Difficult nor Easy	Somewhat Easy	Extremely Easy
Walking	0%	14%	19%	44%	23%
Biking	7%	39%	21%	22%	11%
Driving	1%	24%	16%	39%	20%
Public Transit	0%	13%	23%	42%	22%
<b>Total Average for All Modes</b>	2%	23%	20%	37%	19%

Respondents have a particularly hard time navigating downtown on bike. Over half of frequent bikers have a difficult time navigating, and 46% of infrequent bikers have a hard time navigating as well.

*"I frequently bike, and the signage is extremely difficult to follow. And you do NOT want to get off the beaten path when in the downtown area!!!"*

As St. Paul continues to work on the new Capital City Bikeway system across downtown, these results indicate that the City should focus more heavily on the navigability of the trails in the dense downtown area. For example, the city could install more easily readable, durable signage that directs bikers on a clear path throughout the downtown area.

## Signage Ratings

In this section of the survey, we asked respondents to rate the signage in downtown St. Paul as poor, fair, good, or excellent. Those who rated the signage poor or fair were asked to explain why the signage is not up to par. In the section below we will discuss the results of each type of signage, and draw implications based on the reasoning. In general, respondents agree across the board that the signage in St. Paul is good, though about a quarter of respondents think that the various types of signage in downtown St. Paul are lacking. While we surveyed respondents on the five most popular types of signage in a wayfinding system, this section discusses the three most relevant types of signs in downtown: vehicular directional signage, pedestrian directional signage, and bike/trail signage.

### *Vehicular Directional Signage & Parking Signage*

Vehicular directional signage helps drivers navigate within and to a location. It should be visible from a car and located far enough away for drivers to know when to turn and drive.

Figure 3: Quality of Vehicular Directional Signage (%)

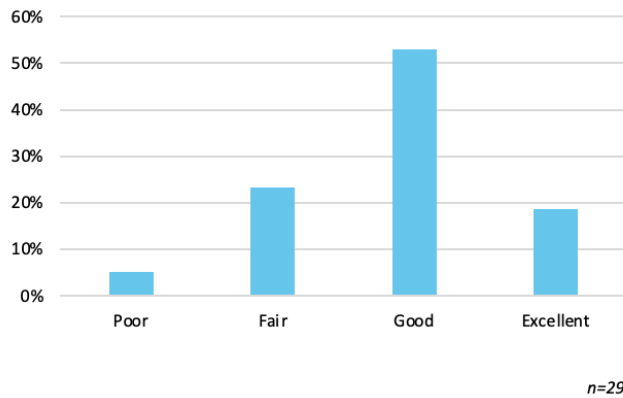
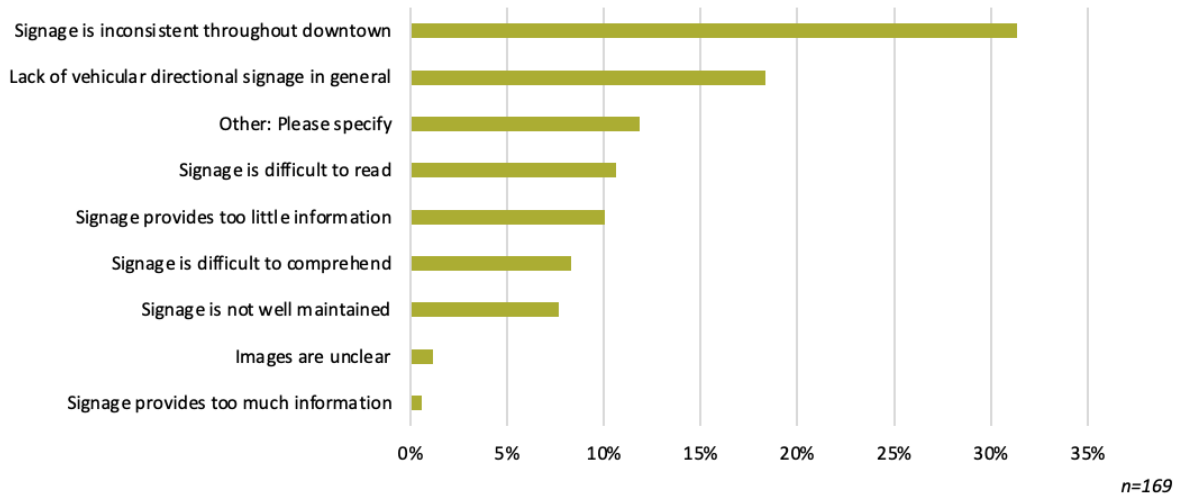


Figure 4: Reasoning for Poor Rating of Vehicular Directional Signage



While a majority of respondents noted that the vehicular directional signage was either good or excellent (71.5%), **those who did not like the quality of the signage noted that it is inconsistent throughout downtown**, as the pictures below display (Images 1, 2, 3). Drivers noted that the signage sometimes comes abruptly, causing drivers to miss their turn and having to navigate a maze of one-way streets to return to their destination. Others said that the signage does not necessarily direct drivers to important landmarks, but rather only lists a few key destinations over and over again.



Image 1, 2, 3 Street Signages

In order to answer the question: “What are the barriers for people in motor vehicles trying to successfully navigate downtown St. Paul?”, we also wanted to understand how users feel about parking. As Figure 5 shows, both frequent and infrequent drivers are overall satisfied with their parking experience, though a little over a third of both frequent and infrequent users are dissatisfied. Of those dissatisfied with their parking experience, 37% noted that there is a **lack of affordable parking options** and 33% said that there is a **lack of parking in general** (Figure 6).

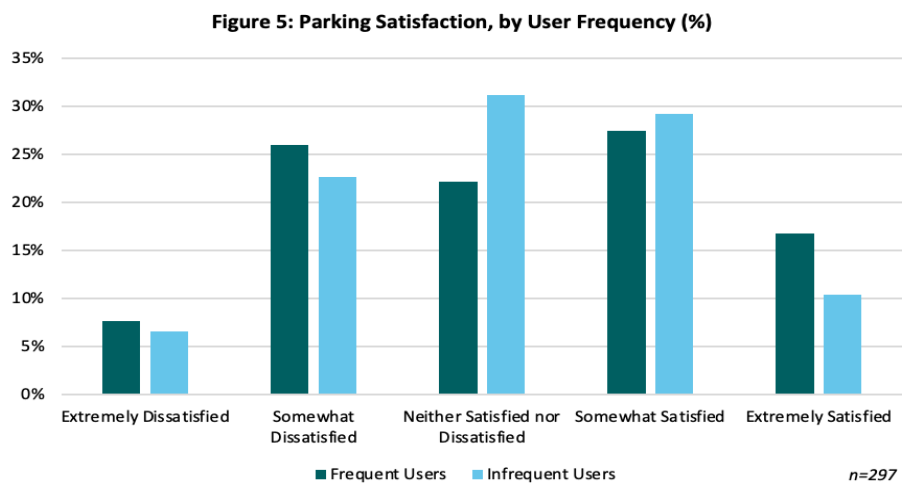
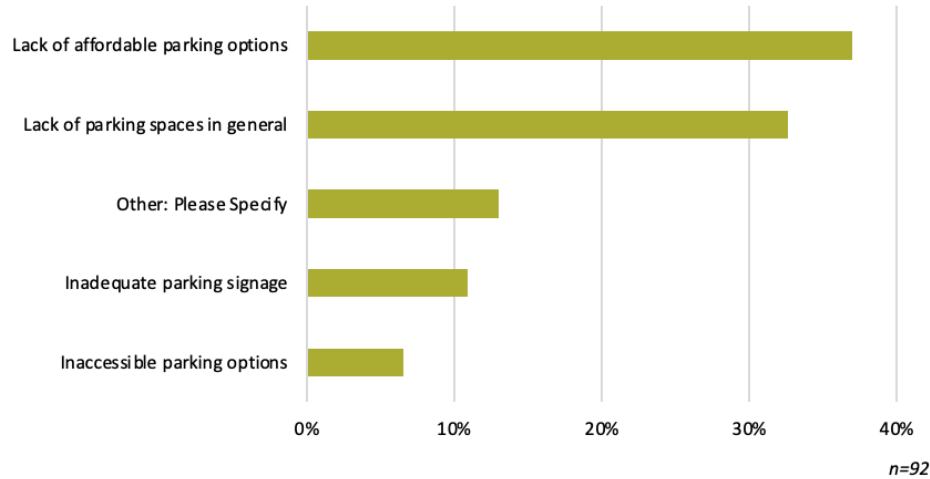


Figure 6: Reasoning for Parking Dissatisfaction (%)



These parking results and the results of the navigability questions discussed above indicate that most drivers in downtown St. Paul do not come across significant barriers in trying to navigate the space. However, for those who do have trouble navigating in a vehicle, the barriers are twofold: 1) **inconsistent, inadequate signage** and 2) **a lack of affordable parking, when parking is even available**. In general, drivers face bigger barriers to parking than they do in driving based on the signage in downtown. As one respondent noted,

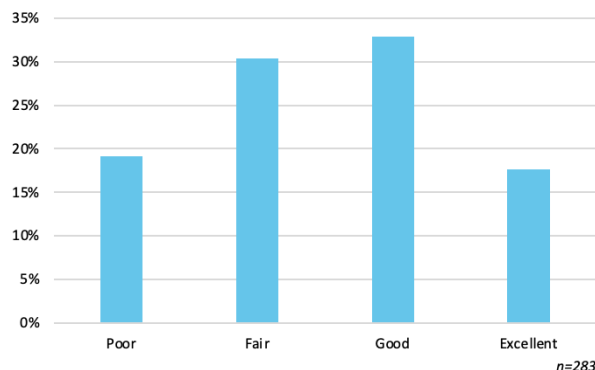
*“[The vehicular directional signage] might get you to the building, but not get you to somewhere to park.”*

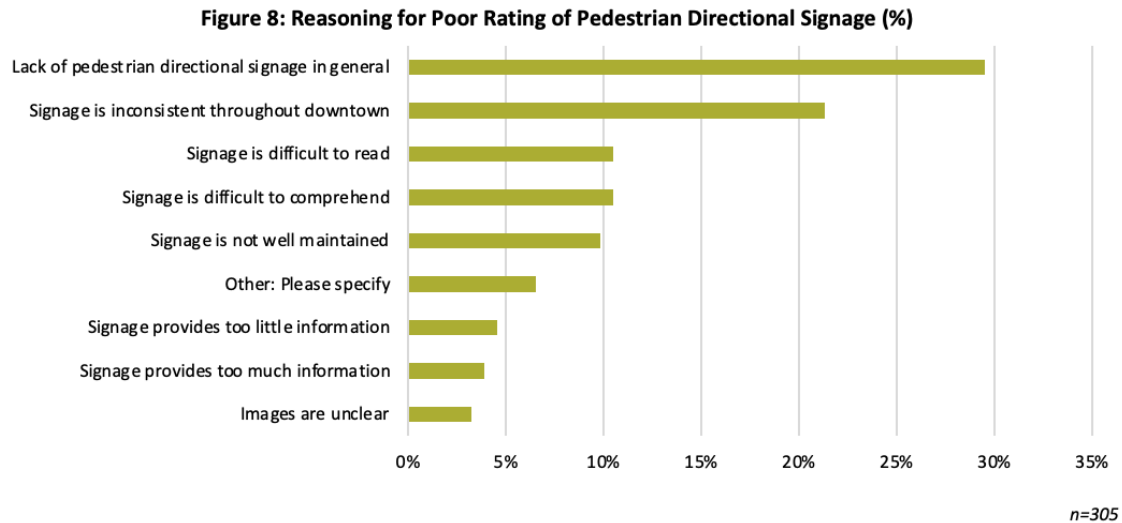
Therefore, any future changes aimed at overcoming the barriers that drivers face in navigating downtown may need to focus more heavily on making parking more accessible and easier to find.

### *Pedestrian Directional Signage*

Of all of the signage types, respondents were most split on pedestrian directional signage, which helps pedestrians navigate within a location; almost 50% of respondents rated this signage as poor or fair (Figure 7).

Figure 7: Quality of Pedestrian Directional Signage (%)





About 30% of respondents noted that there is a lack of signage in general, and 21% noted inconsistent signage throughout downtown, displayed in Figure 8. Additionally, respondents commented that the “pedestrian” signage is often oriented towards drivers, so pedestrians find the signage difficult to read or don’t notice it at all because it is high off of the ground. Fifty respondents noted that the **skyway in particular lacks signage**, both at the ground level to indicate access and in the system itself. Aligning with these comments, our visit to downtown St. Paul provided us with evidence that skyway signage is also incredibly different from one building to the next, as shown in the pictures below.



Images 4, 5: Skyway Signage

A little over 15% of those who rated the pedestrian directional signage as poor or fair referred explicitly to the poor signage in the skyway system. **While the skyway system is intended to enhance the pedestrian experience downtown, these results suggest that it can make downtown more difficult and frustrating to navigate.**

*“If we have to keep [skyways] let’s try and teach folks how to use them.”*

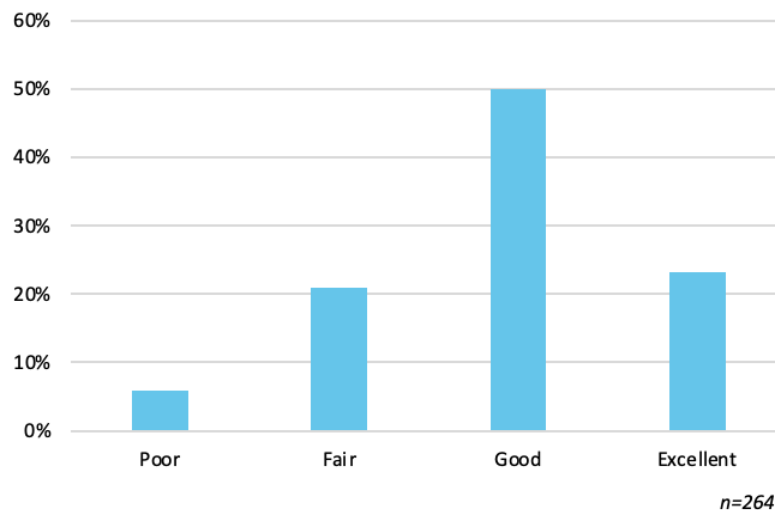
These results indicate that the answer to the question “What are the barriers for pedestrians trying to successfully navigate downtown St. Paul?” lies partially in the skyway system. While pedestrians

note that certain locations are difficult to find due to lack of signage and outdated information, as we will discuss in more detail in the next section, these results indicate that the skyway system itself can make navigating downtown more difficult.

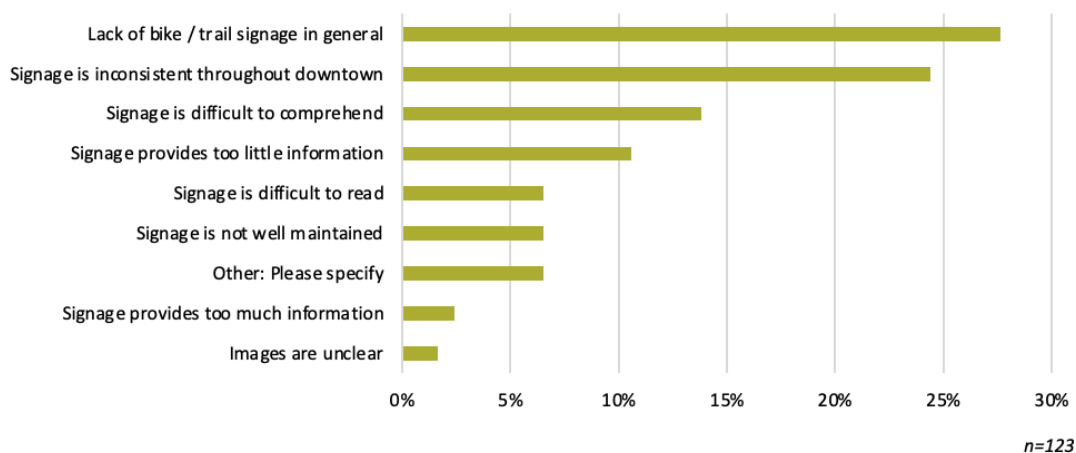
### *Bike / Trail Signage*

Bike / Trail signage helps bikers navigate within and to locations. While the majority of respondents agree that bike/trail signage is sufficient in downtown St. Paul, about a quarter of respondents find a lack of bike/trail signage overall as well as inconsistent signage throughout downtown (Figures 9 & 10).

**Figure 9: Quality of Bike / Trail Signage (%)**

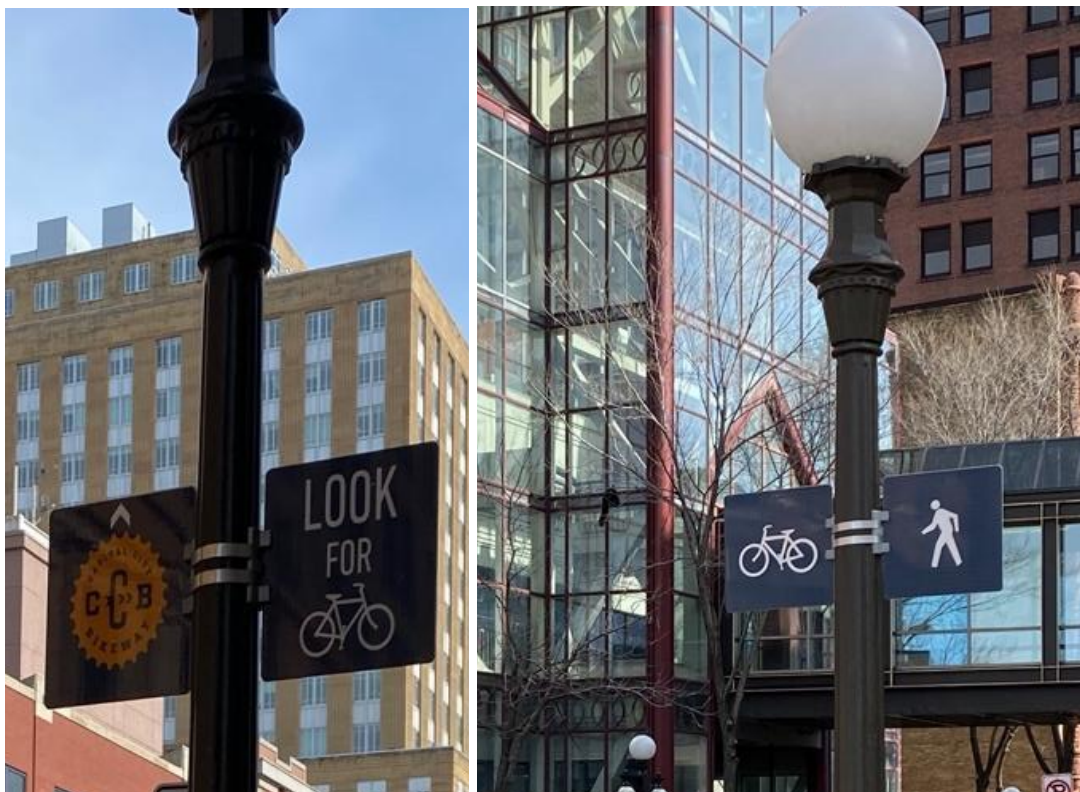


**Figure 10: Reasoning for Poor Rating of Bike/Trail Signage (%)**



Three frequent bikers also noted that the signage does not often tell bikers which trail they are on and is quite small to read from a distance. While St. Paul strives to be a bike-friendly city, these results, and the results of the navigability question above, indicate that **bikers may need more direction to navigate with ease.**





*Images 6, 7: Bike/Trail Signage*

While the Capital City Bike project is trying to make biking easier in St. Paul, most of the signs in downtown only indicate that the biker is *on* a bike path, as displayed in the pictures above. Very few signs that we saw show the biker a map of the bike routes or what trail they are on and where they are headed. In order to improve bipedal wayfinding, one respondent noted:

*"I would love to see more signs indicating which trail you are actually on!"*

## Difficult Locations

In the second part of the survey, we asked respondents to list the three hardest places to find in downtown St. Paul based on their own experiences. While the answers varied widely, as is evident by the wordcloud below, **the most common response across the board for both residents and visitors was businesses located in the skyway.** Out of 343 responses, 15% of respondents said businesses in the skyway are difficult to locate, and 7% of respondents noted that skyway entrances are hard to locate as well. Additionally, respondents listed that the DMV (4%), parking ramps (3%), the Post Office (3%), and public restrooms (3%) are all difficult to locate as well.







Image 9: the reasons above were generated from participants' open-ended responses, and ranked by their frequency of appearance from the most to the least frequent

The infographic on the left reflects the reasoning as to why respondents found these places difficult to locate. Similar to the results from the pedestrian signage question, 16% of respondents noted that **a lack of signage in the skyway** made the maze of second-level passages difficult to navigate. Additionally, 13% of respondents noted that **skyways entrances that are not well marked or closed on the weekends** make it even more difficult for people to navigate the system.

Outside of signage, respondents noted a host of other barriers to navigating downtown St. Paul, including: lack of parking (6%), inability to find locations on maps-based apps (2%), confusing one-way streets (5%), and safety concerns (2%). These results indicate that, while signage can help people find their way, primary concerns regarding actually getting to downtown and feeling secure in downtown may need to be addressed before creating a new signage system. As one respondent claimed,

*"Finding locations is not a problem; Public Safety (specifically lack thereof) is the problem. I won't walk to certain parts of downtown. This must be addressed before improving signage."*

## Conclusions

1. **The majority of St. Paul residents feel comfortable with navigating downtown St. Paul.** While respondents did note that some specific locations are difficult to find, the overall sentiment for those that live in St. Paul and frequent the downtown area is that navigating the space is relatively easy.
2. **For those respondents that rated signage as poor or fair, there is an overall lack of signage in downtown St. Paul and it is inconsistent throughout.** A third of respondents agree that there is a lack of pedestrian and bike/trail signage in the downtown area, and between 20-30% of respondents agree that the vehicular directional signage, pedestrian directional signage, and the bike/trail signage is inconsistent. The images of the signage in downtown St. Paul throughout this report confirm this finding, with signage ranging in size, color, font, and location throughout the small downtown area.
3. **The St. Paul pedestrian experience is particularly difficult to navigate, due in part to the confusing and inaccessible skyway system.** 49.5% of respondents noted that the pedestrian signage is poor or fair. Based on the survey results, this is due in part to the particularly poor signage and navigability of the skyway system.

*“Skyway entrance signs [are] nonexistent, interior signage [is] out of date and hours [are] not posted”*

4. **There are other barriers to navigating downtown St. Paul that may be worth considering prior to installing new signage.** Residents who think the signage in downtown is sufficient did use this survey to note other concerns they have when navigating through downtown. Three respondents noted that safety keeps them from visiting downtown St. Paul.

Additionally, three respondents noted that the signage in downtown is not accessible to specific groups of people. One respondent noted that the signage does not use Indigenous names of locations, and that interpretive signage specifically fails to bring in voices from the Indigenous community. Another respondent stated that both the vehicular directional signage and pedestrian directional signage may be difficult for those who are colorblind or hard of sight because of the color contrast and the small text of the signs.

*“Tell the true history of this land by inviting Native Americans to participate as the TRUE and FIRST Peoples of this country! Indigenous Knowledges are lacking throughout this city”*

Finally, a dozen of respondents noted that the overall pedestrian experience in downtown St. Paul is lacking. One of the most frequent “difficult places to find” was public restrooms, with others noting river access and parks are difficult to find as well.

## Recommendations

1. **In crafting solutions to the barriers that pedestrians, drivers, and cyclists face in navigating downtown St. Paul, be sure to consider non-physical aspects of the wayfinding experience.** Open-ended answers indicate that there are additional barriers outside of physical signage, such as safety concerns, cultural relevance, and a lack of pedestrian amenities. Any attempts to address the barriers to wayfinding should also seek to address these issues alongside updating and maintaining signage.
2. **Work with Visit St. Paul to survey recent tourists about their wayfinding experience.** One of the biggest limitations of this study is the lack of tourist involvement, due in part to the online nature of the survey as well as the fact that there are very few tourists in the area in general because of the pandemic. Prior to advocating for any changes to the wayfinding system, the CRC should first work with Visit St. Paul to understand the barriers tourists face in navigating downtown—which are likely quite different from those barriers for residents who are familiar with the downtown space.
3. **Survey bikers in order to understand their specific needs.** While most respondents said that the biking signage was okay, the navigability question indicates that bikers still seem to have a hard time navigating in the downtown space. As the Capital City Bikeway project progresses, these results indicate that the city and its partners should work more closely with bikers to understand their specific needs in navigating downtown.
4. **Start with the skyway.** In order to improve the wayfinding system downtown, we suggest first focusing on the skyways and the businesses inside of them because respondents had the hardest time finding skyway businesses and entrances. The city should take a more active role in maintaining the signage in the skyway system, which is currently maintained by individual building owners. This piecemeal system has made it difficult for pedestrians to enter and navigate the skyway and for businesses to draw in customers.

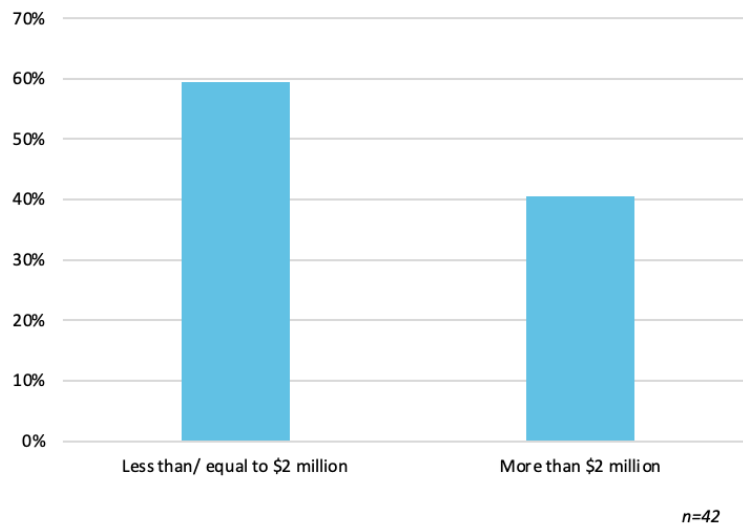
## Results: Business Owner Survey & Interviews

### Respondents Characteristics & Survey Validity

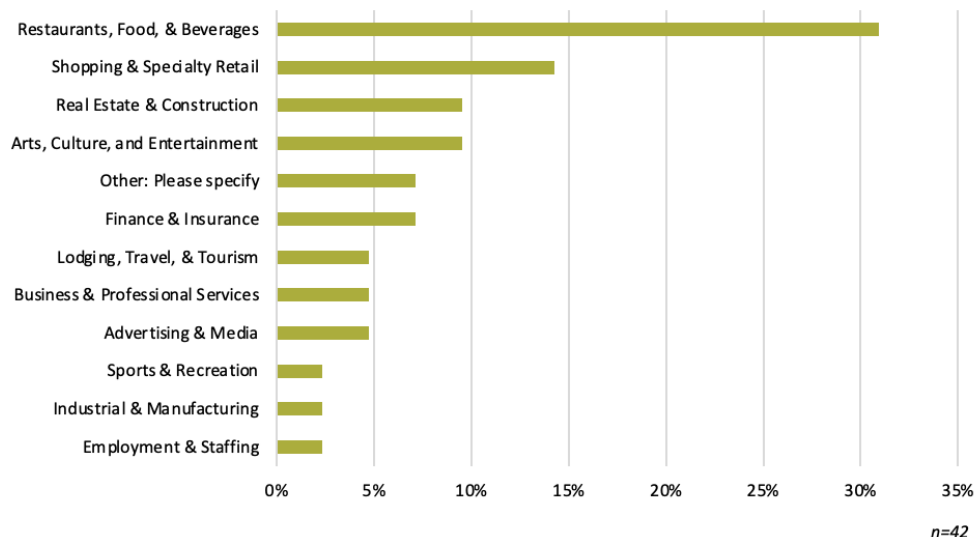
During the survey collection period, there were 68 respondents to the business owners survey. Although the goal sample size was 120 respondents to ensure statistical significance, we believe that in terms of business industry and business size, this sample includes a wide variety of businesses in the wider downtown St. Paul area, indicated by figures 11 and 12. Specifically, there is a mix of both small businesses, with revenue less than or equal to \$2 million (60%) and large businesses with revenue of more than \$2 million (40%). Industry-wise, about one-third of the survey respondents own one or multiple businesses in the restaurants, food & beverage industry, while other popular industries include: shopping & specialty retail, real estate & construction, and arts, culture & entertainment. Among our respondents, there were very few participants who identified as skyway business owners, possibly due to the sample size. As a result, **our discussion**

on the business owners survey is mostly related to street-level businesses and commercial office tenants because our ability to understand skyway business owners' experience in downtown St. Paul is limited.

**Figure 11: Total Annual Gross Revenue (%)**



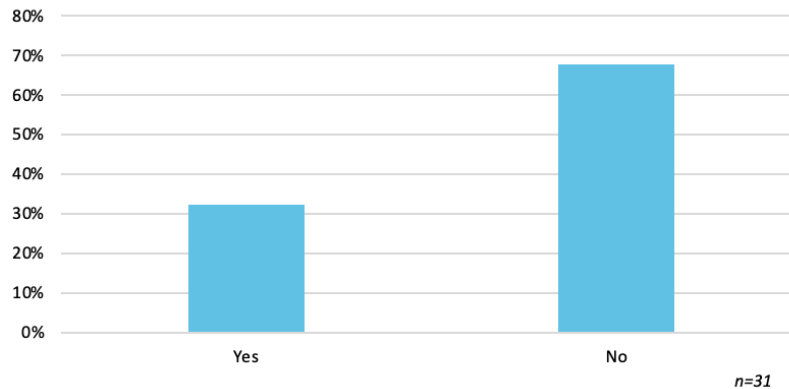
**Figure 12: Industry Category (%)**



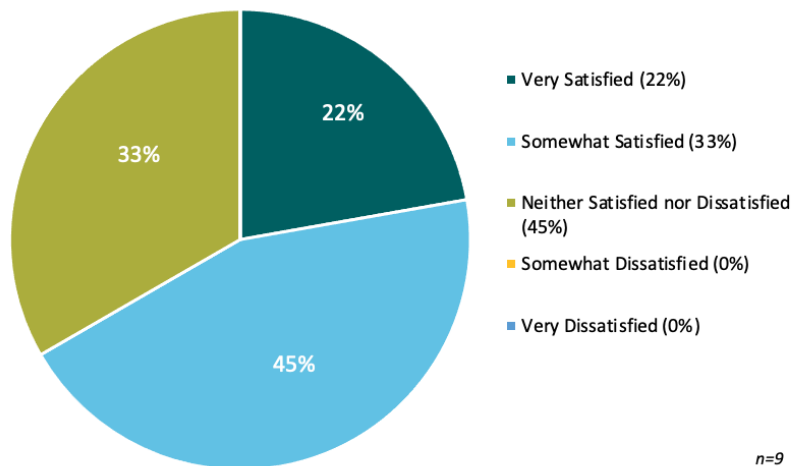
## Experience with the Zoning Board of Appeals

Overall, only 10 business owners worked with the Zoning Board of Appeals (ZBA) in their past experiences putting up signage, displayed in figure 13. Additionally, as indicated in figure 14, none of the business owners who worked with ZBA had negative experiences interacting with the board. Many comments from business owners that are “Somewhat satisfied” with their experiences are **generally negative sensations with the overall process of putting up signing**, and having to deal with the ZBA was just one of the steps that they had to go through.

**Figure 13: Previously Worked with Zoning Board of Appeals (%)**



**Figure 14: Satisfaction of Working with the Zoning Board of Appeals (%)**



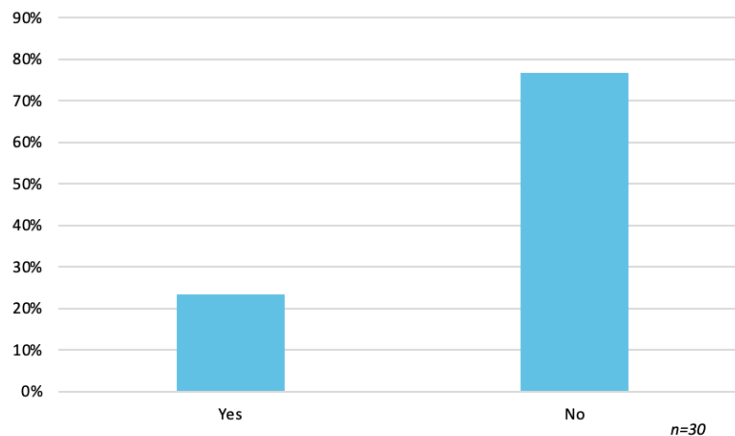
Despite some speculation that appeals may be popular due to strict signage codes, these results indicate that **most business owners are able to put up signs without having to navigate the appeals process**. Additionally, the overall satisfaction with the BZA shows that business owners who do go through the appeals process likely understand the need for an appeal and the process is not overly cumbersome.

## Experience with Heritage Preservation Commission

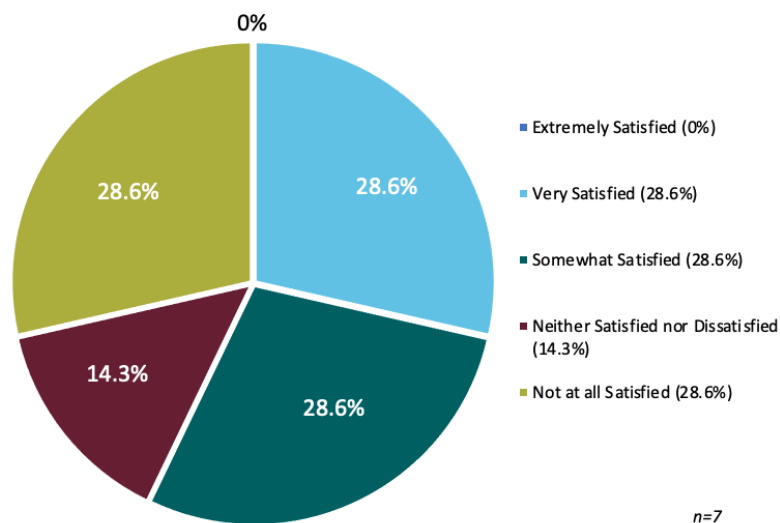
Figure 15 displays that very few business owners worked with the Heritage Preservation Commission (HPC) in their past experiences as well. Out of the 7 business owners that worked with HPC, not many of them have had negative experiences interacting with the commission. Out of the two respondents who are “Not at all satisfied” with HPC, one of them commented on their dissatisfaction with the code itself more than with HPC. Another notable aspect of Figure 16 is that even though the overall experience working with HPC seems relatively neutral, none of the respondents reported being “Extremely satisfied” with their experience. Many reasons can cause

this, one of them being the negative sensation with the overall signage obtaining process, which we will discuss further in the following sections.

**Figure 15: Previously Worked with Heritage Preservation Commission (%)**



**Figure 16: Satisfaction of Working with the Heritage Preservation Commission (%)**



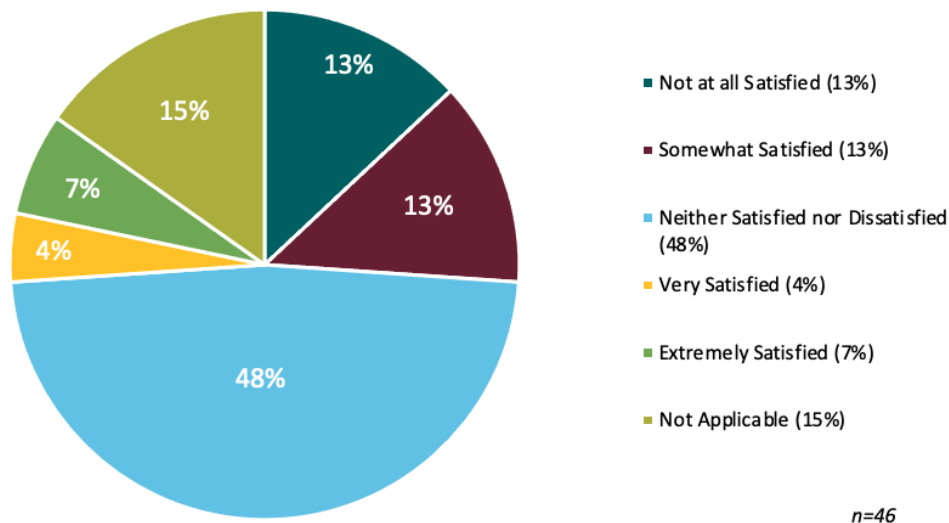
Once again, these results indicate that the HPC may not be as big of a barrier to wayfinding as some business owners think. **While there are a loud minority of owners who dislike working with HPC and find it subjective, the majority of respondents left somewhat satisfied.**

## Satisfaction with Signage Code

In general, business owners' attitudes towards the signage code is relatively neutral, with 48% of respondents indicating that they are neither satisfied nor dissatisfied with the code. However, some of the open-ended responses from those business owners with a neither positive nor negative

attitude commented on the process being cumbersome and having the sensation of subjectiveness and inflexibility in historic preservation specifically.

**Figure 17: Satisfaction with the Signage Code**



The fact that almost half of respondents are neutral about the code, shown in figure 17, may indicate that some owners are unfamiliar with the code overall and therefore feel unfit to comment. While there may be a multitude of reasons that business owners feel neutral, these results could suggest that the city and local community organizations **could do more to inform business owners about the code** and how they can use it to help their business grow during the pandemic and beyond.

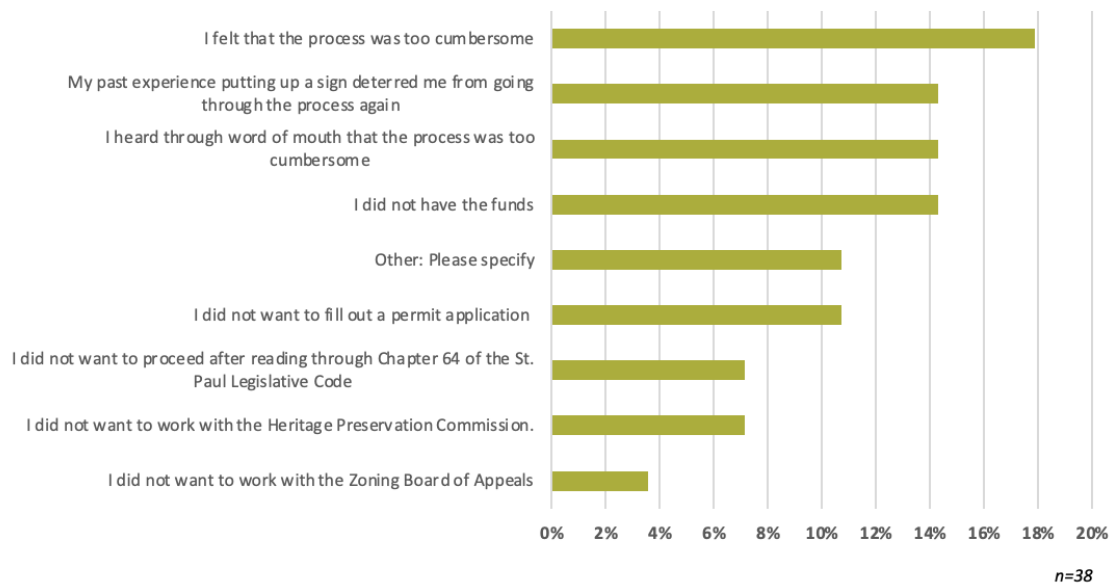
## Experience Putting Up Signage

56% of the survey respondents had put up some sort of signage in the past five years, which is important to note given that a much smaller percentage of respondents then went on to work with either the ZBA or HPC. For the most part, those respondents that put up signage went through the process smoothly. Only 2 out of 53 business owners were asked to take down signage; both of the signs were asked to be taken down because of a direct violation of the signage code.

## Deciding Against Putting Up Signage

In order to gain a deeper understanding of the barriers business owners face in attracting customers, we wanted to know why some business owners never put up signs in the first place. Among the question's respondents, one-third of the business owners decided against putting up new signage in the past two years. A combined 32% respondents reported that **they either feel the process is too cumbersome or have heard that the process is cumbersome** in reasoning for their decisions against putting up a sign. Other popular reasons include not wanting to go through the process again due to past experiences (14%) and the lack of funds (14%).

**Figure 18: Reasoning for Deciding Against Putting Up Signage (%)**



The results in figure 18 demonstrate that the process of putting up signage itself can occasionally outweigh the desire to bring in new customers through new, exciting signage. While the signage code should act as a helpful guide in telling business owners what they can and cannot do, it can instead serve as a barrier to attracting customers and helping pedestrians and drivers navigate the streets of downtown St. Paul. **The fact that some owners have had negative experiences that deterred them from displaying new signage and that business owners have heard rumors about the cumbersome process shows that the city may not be doing its best in promoting business and helping business owners through the process.**

## Interviews

In addition to the survey responses, conducted interviews with business owners from various industries in order to help answer the initial question: “What are the barriers for business owners trying to successfully attract customers in downtown St. Paul?” and asked participants with interest in doing so to leave their email for future contacts. For this question, 13 business owners showed interest in talking to us about their experiences with business signage. Among these respondents, we reached out to those who responded in the survey that they decided against putting up signage or that they had worked with the HPC or ZBA in the past. In the end, the 5 business owners who responded to our email each conducted an interview with us. In these interviews, business owners continued their survey responses and went into detail about their past experiences working with HPC or going through the process of putting up their signage. Since the interview contents are an extension of the survey questions, we will include these conversations in the following conclusion section as sources.



## Conclusions

1. **Business owners want more flexibility.** A few survey comments showed negative attitudes towards HPC's decisions. During the interviews, all business owners noted the importance of historic preservation, but the need to market their own business often seemed to conflict with tight restrictions.

*"Putting a sign on a historic building [that] allows for people to know there is a business is more important than maintaining some 1920s architectural code."*

*"[We] need to look forward and look ahead"*

2. **Business owners want different codes based on the location of the business.** Business owners pointed out the need to have different restrictions based on business location. Having the same code for residential areas and business districts is not beneficial to many businesses in downtown St. Paul.

*"If you choose to live in a business corridor, the zoning should cater more towards the business than the residential."*

*"My key thing is balance...[we] have the ability to have both downtown and the residents [area]"*

3. **Business owners have reported trouble getting a clear explanation of signage code restrictions, which have contributed to the sensation of the process being burdensome.** In interviews, business owners noted a lack of clear and precise explanation from organizations within a timely manner as the main causes of negative experiences. This lack of clear communication caused the sensation of the decision made by particular ZBA or HPC staff as being subjective or arbitrary.

*"Depending on what day, when you turn it in, and who reviews it, you get a different answer."*

*"[I] felt like it had a lot more to do with personal preference than the stated objective of keeping with the historical preservation of the area."*

4. **38% of business owners in the survey commented that the process of putting up signage is cumbersome, or have heard so from others.** In more detailed interviews, business owners expressed the process of putting up signs as being cumbersome and having to visit different organizations for a code explanation. Although some business owners did not have difficulty understanding specific restrictions, going through all the steps in the process was not a pleasant experience.

*“No controversy surrounding it but had to go through the process, just the fact that it took yet more effort.”*

*“Process took longer and required more resources than it should have.”*

*“There are a lot of hoops to jump through—building has to approve the signage for the city to approve the signage...”*

5. **The skyway system in downtown St. Paul seems to be inadequate in supporting businesses and maintaining city dynamics.** Out of the 3 skyway business owners in the survey sample, all of them mentioned not being able to put up signs in the skyway. Despite not being able to interview skyway business owners, other business owners in interviews also showed concern in the lack of signage clarity in the skyway system and its inconsistent maintenance status.

## Recommendations

1. **Work towards shortening and standardizing the process for putting up signage.** 38% of business owners feel that the entire process is too cumbersome, or have heard rumors from others that the process is too difficult. Therefore, the city or partner organizations can look for ways to simplify it for business owners. For example, in the City of Minneapolis, sign permits are only issued to sign contractors licensed by the City. Given the complex nature of the permitting process in St. Paul and the responses of business owners, St. Paul could also require businesses to work with licensed sign contractors rather than try to navigate the system themselves.
2. **Support community organizations in taking a more active role in helping business owners navigate the system.** Because 38% of business owners feel or have heard that the process is too cumbersome, they may decide against putting up signs altogether. Community organizations can therefore help business owners with few resources navigate the complicated system. This can be accomplished through diagramming how the process works on their websites or speaking with business owners directly about their options.
3. **Use a zoning study to look into updating the signage code to provide more nuance in business districts.** Business owners are struggling with marketing their businesses using signage that is quite restrictive for a downtown area. Interviewees in particular noted that the blanket code does not differentiate between residential areas and business districts for the most part, which greatly hinders the ability for business owners to display dynamic and exciting signage. For example, Chapter 64 of the Legislative Code bans all flashing signage of any kind, regardless of where the business is located. Whereas Minneapolis allows for flashing signage in particular business corridors, St. Paul bans flashing signage outright. Numerous interviewees noted that the lack of distinction between what can be done in business corridors and residential areas makes the code seem overly restrictive and more

resident-friendly, even in what should be business-friendly areas. The outright ban on flashing signage and the strict rules regarding dynamic signage could be two specific codes to target when arguing for looser regulations in business districts that set them apart from residential areas.

4. **Conduct a future study on the skyway system.** From the three skyway business owners' responses and other business owners' comments on the skyway system, there seems to be a lot more to explore on the topic. We suggest conducting a study, potentially using a future Humphrey research team, to understand the specific barriers to wayfinding in the skyway system for both residents and business owners.

## Results: Code Comparison & Interview<sup>1</sup>

Last semester, a different team of student evaluators compared the signage code of St. Paul to various other Midwestern cities. This section describes the results the student team found, as well as the conclusions and recommendations the team had for the CRC at the time. This section also has the results of a survey the team conducted with David Eide from the Department of Safety and Inspections regarding the process of obtaining permits.

Type of Signage	St. Paul, MN	Minneapolis, MN	Madison, WI	Cincinnati, OH	St. Louis, MO
<b>Advertising Sign</b>	Prohibited	Permit	Permit	Permit, Prohibited in Downtown District (DD)	Prohibited
<b>Business Sign</b>	Permit	Permit	Permit	Permit, not required if smaller than one square foot	Permit
<b>Canopy Sign</b>	Permit	Permit	Permit	Permit	Permit
<b>Electric Sign</b>	Permit	Permit	Permit	Permit	Permit
<b>Flashing Sign</b>	Prohibited	Permit, Limited to Downtown Entertainment Area	Prohibited, cannot flash more frequently than once every 5 minutes at the maximum	Prohibited	Prohibited

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<sup>1</sup> This section was copied verbatim from the evaluation plan for the Fall 2020 PA 5311 Program Evaluation Course. The report was written by Sarah Friedman, Kobey Layne, Sarah Ritten, & Delaney Stekr.

<b>Freestanding Sign</b>	Permit	Permit, not required if less than 8 sq. ft.	Permit	Permit	Permit
<b>Marquee</b>	Permit	Permit	Permit	Permit	Permit
<b>Portable Sign</b>	Permit	Permit, not required if less than 12 sq. ft.	Permit, not required if displaying info about an event that is permitted	Permit, Prohibited in DD	Permit
<b>Projecting Sign</b>	Permit	Permit	Permit	Permit	Permit
<b>Roof Sign</b>	Permit	Permit	Permit	Prohibited	Permit, Prohibited in Central Business District
<b>Temporary Sign</b>	Permit, not required if concerning a commodity, service or entertainment conducted, offered, sold, or manufactured on the premises, placed inside a window	Permit, not required if less than 8 sq. ft.	Permit, not required if sign meets traffic safety or temporary wayfinding function	Permit	Permit
<b>Wall Sign</b>	Permit	Permit, not required if painted	Permit, not required if a real estate "for sale" sign	Permit, not required if a real estate "for sale" sign	Permit
<b>Window Sign</b>	Permit	Exempt	Permit, not required if sign covers no more than 30% of total window area	Permit, not required if a real estate "for sale" sign	Exempt

Although St. Paul, Minneapolis, Madison, Cincinnati, and St. Louis all require permits for canopy signs, electric signs, marquees, projecting signs, and business signs, **St. Paul's signage codes are stricter than other cities for window signs and advertisements.** St. Paul is the only city that requires a permit without exceptions for window signs, and they also have strict laws about

advertising within the City limits. Without being easily able to put up a sign, businesses in St. Paul are harder to find than in other similar Midwestern cities.

St. Paul was the only city that required permits for all window signs, regardless of type or size. Although Cincinnati only allowed 'for sale' signs, Minneapolis and St. Louis allowed any size of sign in the window of a business. Many businesses are struggling to let customers know they are open during the current pandemic and the strict regulations regarding window signs in St. Paul may hinder businesses from attracting customers. In particular, new regulations regarding business operations and pickup and delivery options for restaurants can be difficult to display in St. Paul in particular because of the strict codes. As the pandemic continues, and restaurants change from indoor dining to pickup only, they have no way to display the changes nor give customers instructions as they may change where customers may pick up food, enter, or exit the parking garage. By allowing businesses to place signs without taking time to apply for a permit, St. Paul will allow businesses to continue to help customers quickly find ways to continue to patronize businesses easily.

**St. Paul and St. Louis were the only cities to prohibit advertising.** St. Paul defined advertising as, "a sign which directs attention to a business, profession, commodity, service or entertainment which is conducted, sold or manufactured elsewhere than on the premises upon which the sign is placed," which unfortunately may include directional signs. This rule, coupled with St. Paul's signage code stating that all signs need to match current signs and all business signs need permits, means that businesses in St. Paul are likely harder to find than those in other cities. This difficulty may result in fewer customers for current businesses and may also act as a barrier to businesses trying to open in the downtown area.

## Informational Interview

In conducting research for our evaluation, we interviewed David Eide, a zoning inspector for the St. Paul Department of Safety and Inspections. While the interview was intended to be informational to contextualize our evaluation, a few of David's observations as an Inspector of the codes we compared above are worth discussing as preliminary results.

**To Eide, the most significant barrier to creating a cohesive wayfinding system in St. Paul was not the zoning codes, but rather the process of getting permits for signage.** Currently, there are three separate permits that business owners may need to obtain to put signage on their business: a business sign permit, a sign variance, and a temporary sign permit. Eide noted that the complex permitting system can be difficult to navigate, particularly for small business owners who cannot afford to hire outside help to get their permits. Whereas larger businesses often hire permitting companies to fill out permits for them, small business owners and those with smaller budgets are often unable to hire outside help. The complex system can be difficult to navigate for a first-time user, so some business owners may struggle to get a permit or give up trying altogether.

Eide also noted that the St. Paul Board of Zoning Appeals (BZA) can be difficult to work with for those who are new to the permit process. Therefore, if smaller business owners need a zoning variance permit, the difficult BZA process may hinder their ability to put up signs in a timely manner.

However, it is important to note that this information is limited to the opinion of one inspector at the City. Because Eide works for the City and spends his days enforcing the zoning codes, it is likely that his responses are biased toward seeing the codes in a positive light. To further understand Eide's hypothesis that the permitting process could be an issue, it is vital that the next evaluators interview more people familiar with the zoning code and permitting system, both inside and outside of the City government. Additional interviews are vital to substantiate Eide's claims and to provide credible results based on a multitude of interviews as opposed to just one voice.

## Conclusions

1. **The process of obtaining a permit and putting up signage itself is a cumbersome process, particularly for small business owners who may not have the funds to hire a contractor to go through the process for them.** Eide's comments and the survey and interview results indicate that the process of obtaining a permit to put up signage and parsing through the code to understand what can and cannot be displayed may be too difficult for some business owners to overcome. Thus, business owners may choose not to put up any signage at all.
2. **Overall, St. Paul was the strictest city when looking at signage codes, with nearly all signs needing permits.** Additionally, St. Paul had the longest code by far, with the number of words in the code almost double the number of words of any other code that we analyzed. While the codes of each city covered similar signage types, St. Paul's code was much more in-depth than other cities. Because permits take time to get in St. Paul, as described below, it may take a long time for a business to let people know it is in operation. If a business is unable to get a permit, residents and tourists will not know where the business is, hindering the growth of businesses in downtown St. Paul.

## Recommendations

1. **Include more "blanket" exemptions to needing permits for a variety of signage types, similar to that of other Midwestern cities.** Whereas many cities provide exemptions in all districts for a variety of signage types, St. Paul's code is explicit in listing exemptions for certain areas and not others, leading to an incredibly long chapter of the code. Therefore, we recommend that St. Paul creates more exemptions for permits across all districts, or at least in business districts.
2. **In order to make the process of obtaining signage less cumbersome, St. Paul could require businesses to work with licensed sign contractors rather than try to navigate**

**the system themselves.** A further explanation of this recommendation can be found in the results section of the business owners survey above.

3. **Create a temporary policy that relaxes the enforcement of restrictions and permitting of portable A-frame signs, window signs, or other similar signage.** In response to the needs of businesses as they struggle to remain open during the coronavirus, the City of Madison, WI, currently has a temporary policy that relaxes the enforcement of restrictions and permitting of portable A-frame signs since currently many businesses rely solely on take-out dining and curbside pickup. A temporary relaxation on permitting for portable signs in St. Paul would allow businesses to more easily direct customers to their storefronts at a moment when many people are unsure if businesses are even open anymore.

## Results: Literature Review

To better understand the standard practices in building and evaluating wayfinding systems and to observe some best wayfinding practices around the country, we reviewed pieces of literature from various wayfinding design firms. We also studied cases of other cities' wayfinding systems for the purpose of highlighting the areas that St. Paul is not meeting the current best practices, and potentially pointing out what St. Paul's wayfinding system could and should be.

### Wayfinding Design Principles

As one of the premiere academics studying wayfinding systems and best practices, Mark Foltz provided a few guiding principles for design decisions when implementing a new wayfinding system (1998). Similarly, wayfinding design firms around the world including Behrend's Group, Lavastar, Designworkplan, Redyref, and MX Display are all guided by some form of design principles originated from Foltz's work. These principles fall into the following groups:

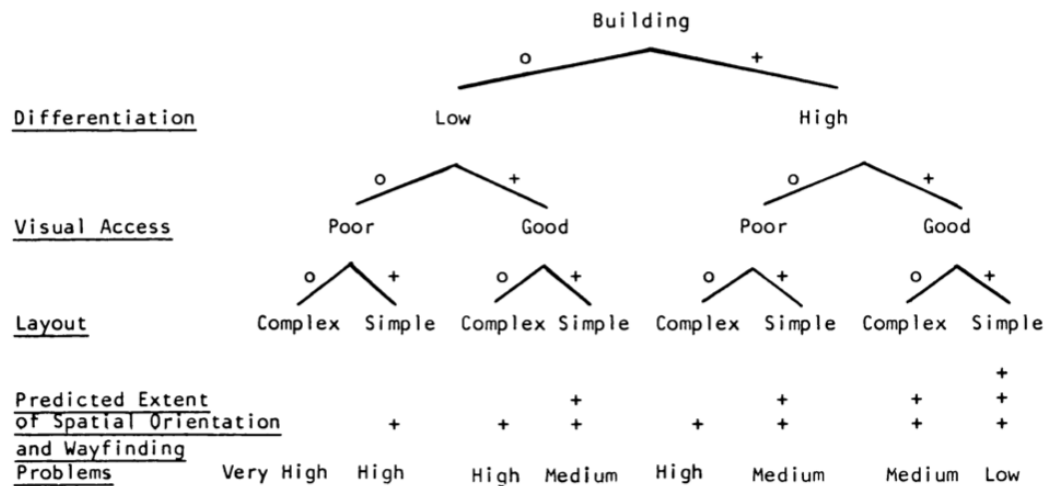
- Create an identity at each location, different from all others.
- Use landmarks as visual cues to provide orientation cues and memorable locations.
- Create paths of movement that are structured well. Have a clear beginning, middle, and end.
- Create regions of differing visual character. Use subtle differences between spaces so people recognize distinction.
- Don't give the user too many choices in navigation.
- Provide signs at decision points to help wayfinding decisions.
- Use sight lines to show what's ahead.

### Post Occupancy Evaluation

Since evaluating the wayfinding system in St. Paul is more like a study focusing on people's perception of their navigation experience rather than designing a new wayfinding system, we also looked into pieces of literature showing patterns in people's spatial orientation and wayfinding in a

designed environment. Scholars developed the model below (Figure 19), presenting the differentiation degree's impact on people's ability to recognize places (Garling, Book, & Lindberg, 1986). This model argues that **it is easier to navigate when being in an environment with different distinct landmarks from various vantage points and seeing differences between buildings**. Following the model, Garling, Book, and Lindberg also found that an environment with a complex layout is more challenging to navigate than simple environments (1986).

**Figure 19**



## Mobile Wayfinding Options

Since more and more people are using technology to navigate, we looked at pieces of related literature to understand mobile wayfinding assistants' functionality and effectiveness. A study focusing on people's wayfinding behaviors in an outdoor environment shows that **people seem to perform better in finding destinations when using verbal cues compared to maps or signs** (Haider & Kolay, 2017). Additionally, for first-time visitors in an area, Haider and Kolay point out that placements of signage and completeness of the information can highly affect the wayfinding experience. It seems like the function of mobile applications or maps can assist people as verbal cues to make up for the misplacement and incompleteness of physical signage and information. Similarly, a study involving individuals in multiple cities including Toronto, New York, Amsterdam, and London shows that although mobile options such as Google Maps are not perfect in terms of local navigation, they do provide convenience for many travelers, especially the ones with the need to get to their destinations in a timely manner (Noone, 2020).

In addition to providing timely support for people, **mobile wayfinding options also seem to have the capacity to assist individuals with special needs**. A study evaluating an existing mobile wayfinding system found that both landmark-based directions and turn-based directions are well-received by some individuals with cognitive impairments in the study since people have different needs (Liu et al., 2009). In general, Liu et al. conclude that study participants appreciate



mobile wayfinding systems, and similar ideas can be implemented in cities to improve the wayfinding experience for individuals with special needs. The implications of these studies for the city of St. Paul will be discussed in the conclusion below.

## Case Studies of Other Cities

For this literature review, we came across literature discussing city wayfinding developments for Philadelphia (PA), Springfield (OR), and Springfield (MA). Scholars for these studies had different experiences and conclusions to share regarding the wayfinding system in city settings. In understanding the wayfinding system in Philadelphia, Berger and Eiss (2002) found that **traffic engineers should be more heavily involved** in creating wayfinding systems in creating input for practicality considerations. The authors also point out that traffic count surveys, parking loads, and related route studies play a critical role in designing various forms of signage and route plans. For the wayfinding system in Springfield (OR), their Community Planning Workshop (2012) found that they need to develop a more comprehensive wayfinding system in further assisting public facilities and services. More specifically, the city evaluation report authors recommend the city create an identifiable logic for city planning, highlight key destinations, carefully consider sign placement and develop better sign designs, and improve bicycle navigation and connectivity. In concluding the lessons learned from Springfield's (MA) wayfinding system, Lu argues that wayfinding design standards should **address all types of users** in order to serve a diverse population (2016). At the same time, signage should be easy to recognize and read. Signs should also be positioned consistently for people to identify information easily, and they should be in a form that allows quick changes and frequent cleaning.

## Conclusions

1. **Multiple resources mentioned the importance of differences in visual characters, which is something that St. Paul can improve.** Many buildings in the city, especially in the Lower Town area, are historically preserved buildings that were built in similar colors and styles, which makes them hard to differentiate between. Having very similar and not very visually apparent signage for these buildings makes it harder for people to navigate among these older, almost identical buildings.
2. **Compared to best practices, signs pointing to specific locations in St. Paul are lacking movement structures.** Based on our site visit to downtown St. Paul, we found that signs provide the destination name and a direction arrow, but typically no amount of distance to the destination. For example, a sign indicating that it is two miles to the Mississippi riverfront. As a result, people see signs pointing in a general direction without distance instructions, which studies show highly decreases the sign's function. The lack of structured movement instructions creates the sense that the signs are not interacting with each other, which makes it hard for people to keep following them.

3. **For mobile options to navigate St. Paul, the city skyway system is not currently clearly displayed in applications such as Google Maps and Apple Maps application.** While the skyway is intended to make the pedestrian experience easier with more direct routes, the lack of mobile applications with skyway routes make it so the skyways seem confusing and desolate. Similarly, businesses operating in the skyway systems are affected negatively because mobile navigation systems do not have the easiest routes to get to the businesses.

## Recommendations

1. **Update the signage code and preservation rules to further differentiate signage on buildings with similar colors and styles.** Chapter 64 of the Legislative Code as well as the Heritage Preservation Commission impose strict restrictions on signage for all buildings, but studies show that similar signage on similar architecture makes it challenging for people to differentiate between buildings and get to their destinations.
2. **Conduct additional research on street traffic signage and improve its consistency throughout the city.** Currently, the street traffic signs are not functioning at their best for navigation support because they are not consistent and rarely interact with each other. Our review of literature concludes that simply having multiple directional signs at various distances from the location for a destination with no apparent structure in movement instructions might confuse people and increase hardship for navigating around downtown St. Paul.
3. **Incorporate the skyway system in mobile map systems.** Despite the fact that mobile apps are highly popular and make wayfinding more accessible for the general population, the skyway system is not consistently displayed in mobile map systems, and thus the skyways are not a route option for mobile map users. While our evaluation has limited data in discussing the skyway system, future research can focus on the skyway system's functioning and make it accessible to everyone.

## Limitations & Bias

We recognize that there are numerous limitations to this evaluation. First and foremost, **self-selection** into taking surveys and sitting for an interview, as well as the use of online surveys may have led to biased results. Additionally, the current **COVID-19 pandemic** limited our ability to conduct surveys in-person after large events, so respondents likely needed to rely more on memory from the last time they visited downtown St. Paul. Due to a **lack of tourism** in the pandemic, we were also unable to fully understand the barriers that tourists in particular face when navigating downtown St. Paul for the first time. In a similar manner, we were unable to garner enough respondents who were business owners in the skyway in order to understand the specific barriers that business owners in the skyway face as well.

We also recognize that our own backgrounds may have biased the results. As two college-educated women, our **privilege and education shape our perspectives**. The fact that both the surveys and interviews were only conducted in English may have also limited the ability for respondents who do not speak English to respond to the survey and interview requests. Despite these limitations, we believe this evaluation design is both high quality and cost-effective and the results may lead to a zoning study conducted by the City of St. Paul or to further research conducted by our community partners.

## Conclusion

As COVID-19 vaccinations continue to roll out across the state of Minnesota, it is important now more than ever for St. Paul to work towards creating a more vibrant, safe, inclusive downtown area. Businesses who have shuttered their doors throughout the pandemic need to attract customers, and residents and tourists alike are finally starting to explore the downtown area and the various businesses, parks, and venues that it has to offer. During this transition back to “normal”, the city can work in conjunction with the CRC and Downtown Alliance to make downtown a post-COVID destination.

In light of this reopening and the city of St. Paul’s goals to make downtown a more vibrant, business and bike-friendly city, this evaluation sought to answer the following questions:

- What are the barriers for business owners in trying to attract customers in downtown St. Paul?
- What are the barriers for people in motor vehicles trying to successfully navigate in downtown St. Paul?
- What are the barriers for pedestrians trying to successfully navigate in downtown St. Paul?
- What are the current wayfinding best practices, and what is standing in the way of enacting these best practices in downtown St. Paul?

Through surveys, interviews, a code comparison, and review of literature, we found a multitude of barriers standing in the way of reaching the goals that the city of St. Paul wants to achieve. Business owners struggle with the **cumbersome process of obtaining a signage permit**, and find the **lack of distinction between business and residential areas** a hindrance to bringing in new business. St. Paul’s strict code in comparison to other cities also may keep business owners from ever trying to obtain a new sign. While most residents feel comfortable navigating downtown St. Paul, many note that a **lack of signage and inconsistent signage** throughout make the downtown area more confusing. The **lack of accessible and affordable parking** also act as barriers for motor vehicle drivers who may find their location with ease, but are then unable to find a parking spot near it. While the skyway system is intended to help pedestrians navigate through downtown with ease and gives business owners more space to open a business, the **lack of signage for pedestrians entering and navigating the skyway system** as well as the difficulties business owners face in putting up signage all make the skyway system a headache rather than a help in navigating downtown St. Paul.

# Appendix A

This appendix consists of the survey and interview questions that respondents used in order to conduct the evaluation.

## Survey Questions: Business Owners

We are graduate students at the University of Minnesota Humphrey School of Public Affairs working with downtown organizations like the CapitolRiver Council and St. Paul Downtown Alliance to conduct research on the zoning code in downtown St. Paul as it pertains to signage. We'd love to hear from you about your experience interacting with the signage code. This survey will help us understand current restrictions and limitations in order to identify clear opportunities to drive business and traffic through improved ways of signage.

The survey should only take 5 minutes, and your responses are completely anonymous. You can only take the survey once, but you can edit your responses until the survey is closed in two weeks, or when we reach the desired number of participants. If you have any questions regarding the survey please send an email to [ritte222@umn.edu](mailto:ritte222@umn.edu).

We really appreciate your input!

Q1 In the past two years, have you added any exterior signage on or near your business location?

- Yes (1)
- No (2)

*Display This Question:*

*If In the past two years, have you added any exterior signage on or near your business location? = Yes*

Q2 Did you work with the Zoning Board of Appeals in order to create and display the signage?

- Yes (1)
- No (2)

*Display This Question:*

*If Did you work with the Zoning Board of Appeals in order to create and display the signage? = Yes*

Q3 Please rate your experience with the Zoning Board of Appeals in adding exterior signage on or near your business location on a scale from 1 to 5, with 1 being not at all satisfied to 5 being extremely satisfied.

- 1 – Not at all Satisfied (1)
- 2 – Somewhat Satisfied (2)
- 3 – Neither Satisfied nor Dissatisfied (3)
- 4 – Very Satisfied (4)
- 5 – Extremely Satisfied (5)

*Display This Question:*

*If Please rate your experience with the Zoning Board of Appeals in adding exterior signage on or near your business location = 1 – Not at all Satisfied*

*Or Please rate your experience with the Zoning Board of Appeals in adding exterior signage on or near your business location = 2 – Somewhat Satisfied*

Q4 Please share more about why you rated your experience as less than satisfactory:

---

*Display This Question:*

*If In the past two years, have you added any exterior signage on or near your business location? = Yes*

Q5 Did you work with the Heritage Preservation Commission in order to create and display the signage?

- Yes (1)
- No (2)

*Display This Question:*

*If Did you work with the Heritage Preservation Commission in order to create and display the signage? = Yes*

Q6 Please rate your experience with the Heritage Preservation Commission in adding exterior signage on or near your business location on a scale from 1 to 5, with 1 being not at all satisfied to 5 being extremely satisfied.

- 1 – Not at all Satisfied (1)
- 2 – Somewhat Satisfied (2)
- 3 – Neither Satisfied nor Dissatisfied (3)
- 4 – Very Satisfied (4)
- 5 – Extremely Satisfied (5)

*Display This Question:*

*If Please rate your experience with the Heritage Preservation Commission in adding exterior signage... = 1 – Not at all Satisfied*

*Or Please rate your experience with the Heritage Preservation Commission in adding exterior signage... = 2 – Somewhat Satisfied*

Q7 Please share more about why you rated your experience as less than satisfactory:

---

Q8 Has the City of Saint Paul ever required you to take down a sign at your business?

- Yes (1)
- No (2)

Display This Question:

*If Has the City of Saint Paul ever required you to take down a sign at your business? = Yes*

Q9 Why were you asked to take down your sign? Please select all that apply:

- I did not obtain a proper permit (1)
- The sign was improperly placed (2)
- The sign was the incorrect size (3)
- The sign interfered with the historic nature of the building (4)
- Other: Please specify (5) \_\_\_\_\_

Q10 Chapter 64 of the St. Paul Legislative Code pertains to the rules and regulations of business signage. The code regulates the time, place, and manner in which signs may be exhibited in St. Paul. On a scale of 1-5, **please rate your satisfaction with Chapter 64 of the Zoning Code as it pertains to best advertising practices for your business**, with 1 being not at all satisfied to 5 being extremely satisfied.

- 1 – Not at all Satisfied
- 2 – Somewhat Satisfied
- 3 – Neither Satisfied nor Dissatisfied
- 4 – Very Satisfied
- 5 – Extremely Satisfied
- Not Applicable

Display This Question:

*If Chapter 64 of the St. Paul Legislative Code pertains to the rules and regulations of business sig... = 1 – Not at all Satisfied*

*Or Chapter 64 of the St. Paul Legislative Code pertains to the rules and regulations of business sig... = 2 – Somewhat Satisfied*

Q11

Please describe your dissatisfaction with the St. Paul Signage Code. Which aspects of the code do you feel inhibit best advertising practices for your business?

\_\_\_\_\_

Q12 In the past two years, have you considered adding signage to your business but ultimately decided against doing so?

- Yes
- No

Display This Question:

*If In the past two years, have you considered adding signage to your business but ultimately decided... = Yes*

Q13 Why did you decide against putting up a new sign? Select all that apply:

- I did not have the funds. (1)
- I did not want to proceed after reading through Chapter 64 of the St. Paul Legislative Code (2)
- I felt that the process was too cumbersome. (3)
- I heard through word of mouth that the process was too cumbersome. (4)
- I did not want to fill out a permit application. (5)
- I did not want to work with the Heritage Preservation Commission. (6)
- I did not want to work with the Zoning Board of Appeals. (7)
- My past experience putting up a sign deterred me from going through the process again. (8)
- Other: Please specify (9) \_\_\_\_\_

Q14 What is your total annual gross revenue?

- Less than/ equal to \$2 million (1)
- More than \$2 million (2)

Q15 Which category best describes your industry?

- Advertising & Media (1)
- Agriculture, Fishing, & Forestry (2)
- Arts, Culture, and Entertainment (3)
- Automotive, Aviation, & Marine (4)
- Business & Professional Services (5)
- Communications (6)
- Computers, IT, & Technology (7)
- Employment & Staffing (8)
- Family, Community, & Non-Profit (9)
- Finance & Insurance (10)
- Government & Education (11)
- Health Care (12)
- Home & Garden (13)
- Industrial & Manufacturing (14)
- Lodging, Travel, & Tourism (15)
- Personal Services & Care (16)
- Pets & Veterinary (17)
- Public Utilities & Environment (18)
- Real Estate & Construction (19)
- Religious Organizations (20)
- Restaurants, Food, & Beverages (21)
- Shopping & Specialty Retail (22)
- Sports & Recreation (23)

- Other: Please specify (24) \_\_\_\_\_

Q16 What is the zip code of your primary business location?

\_\_\_\_\_

Q17 Describe your business location.

- Street level storefront (1)
- Skyway storefront (2)
- Commercial office tenants (3)
- Other: Please describe (4) \_\_\_\_\_

Q18 We will be contacting a subset of respondents for a 15 minute follow-up phone call. If you are interested in being considered, please include your email and first name. Please note your name will not be correlated with your survey responses:

\_\_\_\_\_



## Survey Questions: Residents & Visitors

We are graduate students at the University of Minnesota Humphrey School of Public Affairs working with downtown organizations like the CapitolRiver Council and St. Paul Downtown Alliance to conduct research on the current signage in downtown St. Paul. We'd love to hear from you about your experience navigating downtown. This survey will help us understand current restrictions and limitations in order to identify opportunities to improve the wayfinding system.

The survey should only take 5 minutes, and your responses are completely anonymous. You can only take the survey once, but you can edit your responses until the survey is closed in two weeks, or when we reach the desired number of participants. If you have any questions regarding the survey please send an email to [ritte222@umn.edu](mailto:ritte222@umn.edu).

We really appreciate your input!

Q1 Please describe yourself. Select all that apply:

- Live downtown
- Work downtown, currently working from home
- Work downtown, currently going to work
- Frequent downtown visitor (more than once per month pre-COVID-19)
- Infrequent downtown visitor (less than once per month pre-COVID-19)
- Live in St. Paul, outside downtown
- Live outside St. Paul

Q2 COVID-19 restrictions notwithstanding, which destinations do you frequent most often in downtown St. Paul? Select all that apply:

- Local businesses (1)
- Place of work (2)
- Entertainment venues (3)
- Parks & Recreation Areas (4)

Q3 COVID-19 restrictions notwithstanding, how often do you use the following to reach your destinations in downtown St. Paul?

	Frequently (once a week) (1)	Sometimes (one to three times a month) (2)	Not At All (3)
Walk (1)	0	0	0
Bike (2)	0	0	0
Car / Motorcycle (3)	0	0	0
Public Transportation (4)	0	0	0

Display This Question:

*If How often you use the following to reach your destinations in downtown St. Paul? = Walk [ Frequently (once a week) ]  
Or How often you use the following to reach your destinations in downtown St. Paul? = Walk [ Sometimes (once a month) ]*

Q4 Rate your average ease of navigating while walking to your final destination in downtown St. Paul on a scale from 1 to 5, with 1 being extremely difficult to 5 being extremely easy.

- 1 – Extremely Difficult (1)
- 2 – Somewhat Difficult (2)
- 3 – Neither Difficult nor Easy (3)
- 4 – Somewhat Easy (4)
- 5 – Extremely Easy (5)

Display This Question:

*If How often you use the following to reach your destinations in downtown St. Paul? = Bike [ Frequently (once a week) ]  
Or How often you use the following to reach your destinations in downtown St. Paul? = Bike [ Sometimes (once a month) ]*

Q5 Rate your average ease of navigating while biking to your final destination in downtown St. Paul on a scale from 1 to 5, with 1 being extremely difficult to 5 being extremely easy.

- 1 – Extremely Difficult (1)
- 2 – Somewhat Difficult (2)
- 3 – Neither Difficult nor Easy (3)
- 4 – Somewhat Easy (4)
- 5 – Extremely Easy (5)

Display This Question:

*If How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Frequently (once a week) ]  
Or How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Sometimes (once a month) ]*

Q6 Rate your average ease of navigating while driving or riding to your final destination in downtown St. Paul on a scale from 1 to 5, with 1 being extremely difficult to 5 being extremely easy.

- 1 – Extremely Difficult (1)
- 2 – Somewhat Difficult (2)
- 3 – Neither Difficult nor Easy (3)
- 4 – Somewhat Easy (4)
- 5 – Extremely Easy (5)

Display This Question:

*If How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Frequently (once a week) ]  
Or How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Sometimes (once a month) ]*

Q7 How satisfied are you with your experience finding parking?

- Extremely dissatisfied (1)
- Somewhat dissatisfied (2)
- Neither satisfied nor dissatisfied (3)
- Somewhat satisfied (4)
- Extremely satisfied (5)

Display This Question:

*If How satisfied are you with your experience finding parking? = Extremely dissatisfied*

*Or How satisfied are you with your experience finding parking? = Somewhat dissatisfied*

Q8 What makes finding parking difficult in downtown St. Paul? Select all that apply.

- Lack of parking spaces in general (1)
- Lack of affordable parking options (2)
- Inadequate parking signage (3)
- Inaccessible parking options (4)
- Other: Please Specify (5) \_\_\_\_\_

*Display This Question:*

*If How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Frequently (once a week) ]*

*Or How often you use the following to reach your destinations in downtown St. Paul? = Car / Motorcycle [ Sometimes (once a month) ]*

Q9 Please rate your ease of navigating to your final destination with the directional signage visible from your vehicle on a scale of 1 to 5, with 1 being very difficult to 5 being very easy.

- 1 – Extremely Difficult (1)
- 2 – Somewhat Difficult (2)
- 3 – Neither Easy nor Difficult (3)
- 4 – Somewhat Easy (4)
- 5 – Very Easy (5)

*Display This Question:*

*If Please rate your ease of navigating to your final destination with the directional signage visibl... = 1 – Extremely Difficult*

*Or Please rate your ease of navigating to your final destination with the directional signage visibl... = 2 – Somewhat Difficult*

Q10 What specifically about the directional signage makes finding your destination difficult?

*Display This Question:*

*If How often you use the following to reach your destinations in downtown St. Paul? = Public Transportation [ Frequently (once a week) ]*

*Or How often you use the following to reach your destinations in downtown St. Paul? = Public Transportation [ Sometimes (once a month) ]*

Q11 Please rate your average ease of navigating while taking public transportation to your final destination in downtown St. Paul on a scale from 1 to 5, with 1 being extremely difficult to 5 being extremely easy.

- 1 – Extremely Difficult (1)
- 2 – Somewhat Difficult (2)
- 3 – Neither Difficult nor Easy (3)
- 4 – Somewhat Easy (4)
- 5 – Extremely Easy (5)

Q12 In the next few questions, you will be asked to rate each type of sign in downtown St. Paul on a scale from Excellent to Poor. **Accompanying pictures are generic examples of each type of sign found across the United States.**

Q13 Gateway Identification Signage - identifies the entrance to a specific location



- Excellent
- Good
- Fair
- Poor
- N/A

Display This Question:

If Gateway Identification Signage - identifies the entrance to a specific location = Poor

Or Gateway Identification Signage - identifies the entrance to a specific location = Fair

Q14 What specifically about the gateway identification signage in downtown St. Paul makes it poor or fair? Select all that apply:

- Lack of gateway identification signage in general (1)
- Signage is difficult to read (2)
- Signage is difficult to comprehend (3)
- Signage is inconsistent throughout downtown (4)
- Signage provides too much information (5)
- Signage provides too little information (6)
- Images are unclear (7)
- Signage is not well maintained (8)
- Other: Please specify (9) \_\_\_\_\_

Q15 Vehicular Directional Signage - helps drivers navigate within a location



- Excellent (1)
- Good (2)

- Fair (3)
- Poor (4)
- N/A (5)

Display This Question:

*If Vehicular Directional Signage - helps drivers navigate within a location = Fair*  
*Or Vehicular Directional Signage - helps drivers navigate within a location = Poor*

Q16 What specifically about the vehicular directional signage in downtown St. Paul makes it poor or fair? Select all that apply:

- Lack of vehicular directional signage in general (1)
- Signage is difficult to read (2)
- Signage is difficult to comprehend (3)
- Signage is inconsistent throughout downtown (4)
- Signage provides too much information (5)
- Signage provides too little information (6)
- Images are unclear (7)
- Signage is not well maintained (8)
- Other: Please specify (9) \_\_\_\_\_

Q17 Pedestrian Directional Signage - helps pedestrians navigate within a location



- Excellent (1)
- Good (2)
- Fair (3)
- Poor (4)
- N/A (5)

Display This Question:

*If Pedestrian Directional Signage - helps pedestrians navigate within a location = Fair*  
*Or Pedestrian Directional Signage - helps pedestrians navigate within a location = Poor*

Q18 What specifically about the pedestrian directional signage in downtown St. Paul makes it poor or fair? Select all that apply:

- Lack of pedestrian directional signage in general (1)
- Signage is difficult to read (2)
- Signage is difficult to comprehend (3)
- Signage is inconsistent throughout downtown (4)
- Signage provides too much information (5)
- Signage provides too little information (6)
- Images are unclear (7)
- Signage is not well maintained (8)

- Other: Please specify (9) \_\_\_\_\_

Q19 Bike / Trail Signage - helps bikers navigate within and to locations



- Excellent (1)
- Good (2)
- Fair (3)
- Poor (4)
- N/A (5)

Display This Question:

If Bike / Trail Signage - helps bikers navigate within and to locations = Fair

Or Bike / Trail Signage - helps bikers navigate within and to locations = Poor

Q20 What specifically about the bike / trail signage in downtown St. Paul makes it poor or fair?

Select all that apply:

- Lack of bike / trail signage in general (1)
- Signage is difficult to read (2)
- Signage is difficult to comprehend (3)
- Signage is inconsistent throughout downtown (4)
- Signage provides too much information (5)
- Signage provides too little information (6)
- Images are unclear (7)
- Signage is not well maintained (8)
- Other: Please specify (9) \_\_\_\_\_

Q21 Interpretive Signage - informs readers of a location's history and culture





- Excellent (1)
- Good (2)
- Fair (3)
- Poor (4)
- N/A (5)

*Display This Question:*

*If Interpretive Signage - informs readers of a location's history and culture = Fair*

*Or Interpretive Signage - informs readers of a location's history and culture = Poor*

Q22 What specifically about the interpretive signage in downtown St. Paul makes it poor or fair?

Select all that apply:

- Lack of interpretive signage in general (1)
- Signage is difficult to read (2)
- Signage is difficult to comprehend (3)
- Signage is inconsistent throughout downtown (4)
- Signage provides too much information (5)
- Signage provides too little information (6)
- Images are unclear (7)
- Signage is not well maintained (8)
- Other: Please specify (9) \_\_\_\_\_

Q23 In your opinion, what are the three hardest places to find within downtown St. Paul?

\_\_\_\_\_

Q24 Why do you find these locations difficult to find?

\_\_\_\_\_

Q25 Where did you hear about this survey?

- Email from CapitolRiver Council (1)
- CapitolRiver Council Facebook page (2)
- Email from St. Paul Downtown Alliance (3)
- St. Paul Downtown Alliance Facebook page (4)
- Email from Visit St. Paul (5)
- Referred by friend/colleague (6)
- Other: Please specify \_\_\_\_\_



## Interview Questions

Script: Thank you for meeting with us today and agreeing to speak about your experience with the signage code in St. Paul. Please note that your information will be anonymous. If you do not feel comfortable answering this question we can move onto the next question. To provide a bit of background, as you probably read in the survey, we are really trying to understand the barriers that business owners face in putting up signage. We are working with the CapitolRiver Council and St Paul Downtown Alliance to hopefully use the results of the survey and these interviews to provide the city with concrete examples of the issues business owners face in the hopes that a zoning study can start to potentially look at making some changes.

Before we start the interview questions, would you mind if we record this conversation? We would like to use the recording to pull quotes and find common themes amongst interviewees.

1) (If applicable) How was your experience working with the Zoning Board of Appeals and/or Historic Preservation Commission to add exterior signage to your business? Can you explain a bit more in depth as to why it was a negative experience?

**[Open-Ended]**

2) (If applicable) Can you explain in a bit more detail the process in which you decided to ultimately not put up a new sign? Were there any barriers to creating the signage that you felt was too onerous to overcome?

**[Open-Ended]**

3) Do you feel that there could be a better balance between historical preservation and being business friendly?

**[Open-Ended]**

4) If you could change the City Signage Code, what would you change about it in order to make it more friendly to business owners like yourself?

**[Open-Ended]**

5) Do you have any other comments you would like to make?

**[Open-Ended]**

# Appendix B

This appendix includes all of the previously submitted assignments for PA 8081 with revisions as well as a few assignments submitted in the fall by the student evaluation group who wrote the original evaluation plan for the CRC. This appendix includes a more detailed discussion of the logic model that we used to guide the evaluation, the full evaluation design and matrix, as well as the full data collection and analysis plan.

## Object Description

As the capital of the state, St. Paul is a destination for both visitors and residents looking for entertainment, culture, and food. The current wayfinding system in St. Paul is intended to guide visitors and residents to these various venues through a series of signs and landmarks throughout the city. Through a successful wayfinding system, St. Paul can sustain economic viability by directing residents and visitors alike to the hundreds of businesses, cultural institutions, and entertainment venues in the area. The CapitolRiver District Council (CRC), which seeks to engage the St. Paul community on issues that affect downtown St. Paul specifically, is interested in a focused understanding of the zoning and legislative barriers to creating a cohesive wayfinding system in the downtown St. Paul area.

## Goals

The wayfinding system in St. Paul is designed to help visitors, businesses, and residents orient themselves in the city through a series of easily identifiable signs and landmarks. A successful wayfinding system promotes both community identity and vitality by providing users with a clear sense of place while also allowing users to explore locations off of their original intended route without fear that they will not be able to find their way back. In order to achieve these goals, the wayfinding system is designed to increase confidence and mitigate confusion for locals and visitors seeking to visit parks, events, and amenities in downtown St. Paul. Some goals of this specific wayfinding evaluation is to:

- Identify and evaluate the ways that the City of St. Paul zoning codes and ordinances impact the current wayfinding system.
- Identify legislative opportunities the CRC could advocate for in order to improve wayfinding in downtown St. Paul.
- Design an evaluation plan that can address the goals above.

## Setting

As the capital of Minnesota, St. Paul is known for its host of award-winning restaurants, the Mississippi riverfront, and large entertainment events. The downtown area of St. Paul is packed with many of these amenities, despite the fact that it is only about one square mile ("Downtown Neighborhood," n.d.). Although the downtown area is easily walkable, the CRC has heard from residents, visitors, cultural institutions, and businesses alike that people sometimes struggle to figure out their way through the skyways or streets and that zoning requirements that prevent

exterior signage can make parts of downtown seem confusing and desolate. The downtown St. Paul community is motivated to make changes to improve the downtown area, with current plans in the works to improve ease of biking transportation and bring more visitors to the downtown area. In order to help new visitors and residents--both those on foot and on bikes--navigate the downtown area, the CRC wants to better understand the opportunities and barriers the current wayfinding system presents.

## *Staffing*

There is not one organization or person that is responsible for developing and implementing the St. Paul wayfinding system. Signs for the wayfinding system are expected to be posted and updated depending on who owns the property rights of where the signage is to be placed. For example, all skyway signage needs to be either installed or approved by private business owners. The approval process to post signs, regardless of property rights, often involves staff that administer the signage regulations in the St. Paul Department of Safety and Inspections, St. Paul Parks and Recreation Department, the St. Paul Heritage Preservation Commission, and/or the Minnesota Department of Transportation. Even temporary signage for a major event requires coordination among building owners and staff in various government entities.

The CapitolRiver Council itself is a non-profit advisory group to the St. Paul City Council. Jon Fure is the executive director of the CRC, one of two direct staff members for the non-profit. The CRC also has a council board of nine members, all of whom are known stakeholders in the downtown St. Paul community. Although the CRC does not have direct influence on the wayfinding system in downtown, its advisory role to the City Council can influence citywide decisions about changes to the current wayfinding system.

## *Participants*

The St. Paul wayfinding system is used by both residents of the city who traverse downtown every day as well as visitors and tourists exploring the city for the first time. Residents and visitors use the signs and maps of the St. Paul wayfinding system to walk through the skyways, find business and restaurant locations, and make their way from one side of downtown to the other. This evaluation in particular will seek to understand the ways in which private business owners interact with the wayfinding system and the zoning codes that influence it in downtown St. Paul. Private businesses use signage to direct visitors and residents to their stores and restaurants, and rely on City and State signage to help their customers reach their final destination.

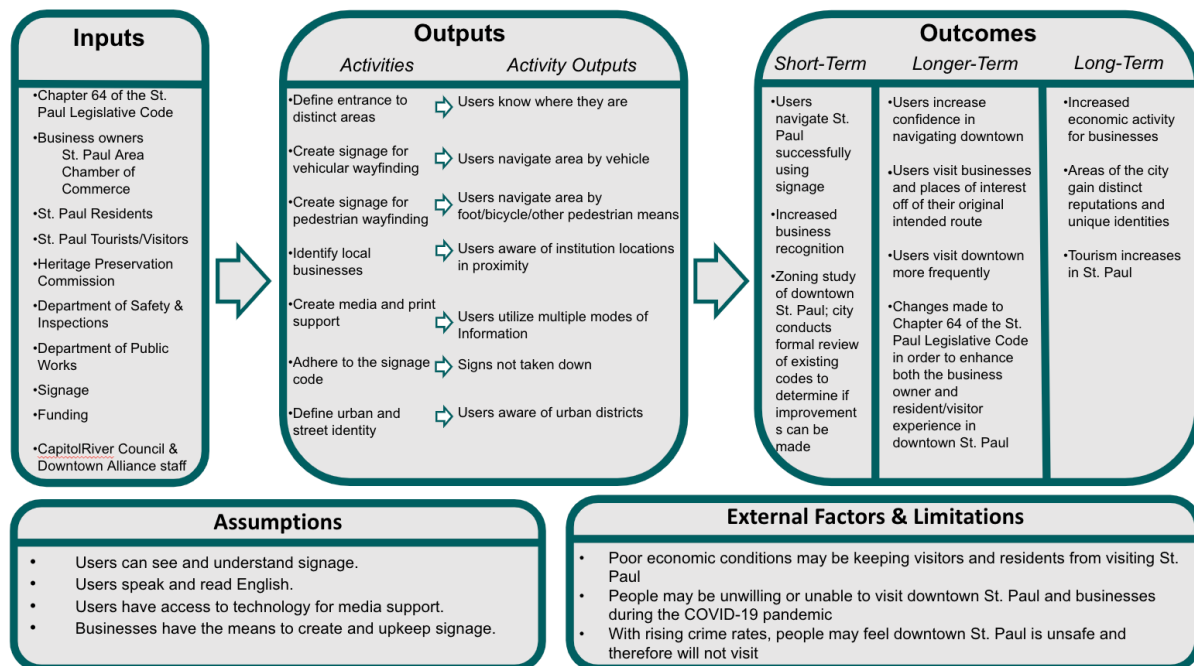
## *Activities*

The St. Paul wayfinding system uses signage for both vehicular wayfinding and pedestrian wayfinding in order to point drivers and pedestrians in the right direction across the downtown area. Visitors and residents use this signage to find parking, public transportation, cultural institutions, parks, businesses, and other points of interest. In order to create signage that can be used in the wayfinding system, various levels of government and private business owners are required to adhere to strict zoning codes.

## Budget

Signage for the St. Paul wayfinding system is paid for and maintained by a host of entities including, but not limited to, St. Paul City government, Minnesota Department of Transportation, private business owners, and local cultural institutions. Private business owners are not bound to spend a certain amount of money on signage, so the type and location of signage per business varies widely depending on the individual budget of each entity. Whereas the St. Paul City government does not advertise a set budget to spend on signage each year, the Minnesota Department of Transportation has detailed policies on replacing signage each year depending on its tenure.

## Logic Model



# Design Matrix

Researchable Question	Information Required and Sources	Methods	Limitations	Potential Findings and Use
What question are you trying to answer?	What information is needed to answer the question and what is your planned source?	How will each question be answered?	What are the limitations of these methods?	What will the analysis allow you to say? How will this information inform action?
What are the barriers for business owners trying to successfully attract customers in downtown St. Paul?	Feedback from business owners <a href="#">St. Paul Legislative Code Chapter 64</a>	Survey of business owners via St. Paul Area Chamber of Commerce  Interviews with business owners  Analysis of St. Paul signage zoning code compared to similar Midwestern cities	Self-selection of survey and interview participants may lead to biased results  The unique skyway system and historic preservation may make finding comparable cities difficult  General lack of foot-traffic due to COVID makes attracting customers difficult	Allow us to understand specific aspects of the signage code and other barriers to creating signage with which business owners have trouble  Give the CRC data to use in order to persuade the City to conduct a zoning study
What are the barriers for people in motor vehicles trying to successfully navigate downtown St. Paul?	Feedback from drivers	Survey of residents via CRC contacts at Visit St. Paul	Self-selection of survey participants may lead to biased results	Allow us to determine the shared barriers drivers in St. Paul face as they navigate from their vehicles  Give the CRC data to use in order to persuade the City to conduct a zoning study

What are the barriers for pedestrians trying to successfully navigate downtown St. Paul?	Feedback from pedestrians, both locals and tourists. <a href="#">St. Paul Legislative Code Chapter 64</a>	Survey of pedestrians via CRC contacts at Visit St. Paul as well as other local organizations that interact with pedestrians	Self-selection of survey participants may lead to biased results.  COVID-19 guidelines do not allow large events to take place, limiting the number of pedestrians, and particularly tourists, in St. Paul right now. This may hinder reliable survey results.	Allow us to understand the inconveniences and deterrents caused by zoning code(s) that lead tourists, pedestrians, and residents to navigate downtown differently or less frequently.  Give the CRC data to use in order to persuade the City to conduct a zoning study.
What are the current wayfinding best practices, and what is standing in the way of enacting these best practices in downtown St. Paul?	Resources detailing the current best practices of wayfinding.  Feedback from business owners, pedestrians, and drivers.  <a href="#">St. Paul Legislative Zoning Code Chapter 64</a>	Literature Review of current wayfinding systems across the United States  Analysis of St. Paul Legislative Code Chapter 64 compared to compiled best practices.	There are no set "best practices" agreed upon by all cities, so the list of sourced best practices may be biased by limitations in available wayfinding practice resources and the evaluators' own experiences with wayfinding.  Cities are all different for a wide variety of reasons, which can make direct comparisons difficult because there will be variation regardless.	Allow us to find direct examples of where the St. Paul wayfinding system is out of date or out of best practices  Policymakers often use other cities as benchmarks, so this analysis will give the CRC comparable data to use in order to persuade the City to conduct a zoning study.

## Evaluation Design

CapitolRiver Council (CRC) members have received feedback from businesses, visitors, and residents that there are several challenges to wayfinding in the downtown St. Paul area. First-time visitors to museums or entertainment venues sometimes struggle to figure out their way through the skyways or streets to their destination, and zoning requirements that prevent certain types of exterior signage can make parts of downtown seem confusing and desolate. This evaluation seeks to better understand the barriers to wayfinding in downtown St. Paul, which may impede the City from achieving its overarching goals of helping businesses recover and restore downtown in the wake of COVID-19.

The intended outcome of this evaluation will be the short-term outcome of a zoning study of the St. Paul Zoning Code Chapter 64 conducted by the city of St. Paul. This zoning study is the first step to potentially changing the current wayfinding system to better align with the goals of restoring downtown St. Paul and helping businesses recover in the wake of the COVID-19 pandemic.

### *Design Matrix Questions*

The first question outlined in the Design Matrix is: ***What are the barriers for business owners in trying to successfully attract customers in downtown St. Paul?*** This question aligns directly with the client's expressed interest in understanding the difficulties business owners have in complying with the signage code and the signage creation process in downtown St. Paul. While business owners have expressed frustrations regarding the code for years, the CRC wants to understand the exact codes and processes that owners have the most trouble following. Due to the complex dynamic of the wayfinding system, we will use three data collection methods to answer this question: surveys, interviews, and a zoning code comparison (Hargreaves, 2010).

The second question that this design matrix seeks to answer is: ***What are the barriers for people in motor vehicles trying to navigate successfully in downtown St. Paul?*** This question deals with federal, state and local ordinances and guidelines on signage in the public right of way. In order to discover which ordinances are a barrier for wayfinding, we will survey drivers via an online survey sent out through the CRC and Downtown Alliance networks in order to find out which intersections or signage scenarios are difficult to navigate.

The third question that this design matrix seeks to answer is: ***What are the barriers for pedestrians in trying to navigate successfully in downtown St. Paul?*** Many pedestrians-- local workers, bikers, tourists, and more--navigate downtown every day. Our client wants to know what directly or indirectly deters pedestrians from coming into downtown St. Paul. To study this, we will conduct surveys through the CRC network and contacts to get an in-depth look into the barriers pedestrians face while navigating through St. Paul.

The final question in the design matrix asks: ***what are the current best wayfinding practices, and what is standing in the way of enacting these best practices in downtown St. Paul?*** The CRC has expressed interest in learning what the best practices in wayfinding currently are across the world, so they can then point to specific barriers in the way of achieving these best practices. We will

conduct a review of literature to determine the best practices in wayfinding as they currently stand, and then use the survey and interview results as well as the code comparison to determine which barriers are preventing the best practices from being implemented in downtown St. Paul and to make recommendations.

## *Methodology*

The surveys are intended to provide a brief synopsis of the ways in which business owners, drivers, and pedestrians interact with the wayfinding system. An online survey is a low-cost, high representative method to gain data from a wide variety of respondents in a relatively quick amount of time (Jones et al., 2011). We will use CRC contacts with the St. Paul Area Chamber of Commerce and Visit St. Paul in order to send out the electronic survey to business owners, drivers, and pedestrians.

Given the low stake that both pedestrians and drivers have in answering survey questions, we do not intend to conduct follow up interviews with either group of respondents. However, in order to gain a deeper understanding of barriers to wayfinding in the complex system, we do intend to interview business owners after receiving answers to the initial surveys.

Finally, last semester students compared the signage code in St. Paul to similar Midwestern cities. This exercise helped the CRC identify codes in St. Paul that are not replicated in other cities, which may indicate that some St. Paul codes are unnecessary or too restrictive in comparison to similar cities. Seeing as cities often look to similar cities in order to enact policy changes, this exercise may persuade the City to conduct a zoning study.

Each of these overarching questions and subsequent data collection methods will help the CRC identify the barriers to a cohesive wayfinding system in downtown St. Paul. This data can then be used to persuade the City to conduct a zoning study, which may result in lowering these wayfinding barriers.

## *Limitations*

However, we recognize that there are numerous limitations to this evaluation. First and foremost, self-selection into taking surveys and sitting for an interview, as well as the use of online surveys may lead to biased results. The current COVID-19 pandemic also limits the evaluation's ability to conduct surveys in-person after large events, so respondents will likely need to rely more on memory from the last time they visited downtown St. Paul. Despite these limitations, we believe this evaluation design is both high quality and cost-effective and the results may lead to a zoning study conducted by the City of St. Paul.



# Analysis Plan

## *Surveys*

The primary method of gathering data for this evaluation is through administering surveys. We will administer two surveys to two groups of relevant stakeholders: business owners and residents and visitors. The business owner survey is designed to gain insight into the challenges business owners face in creating and displaying signage in downtown St. Paul, and the resident and visitor survey seeks to understand the barriers pedestrians, cyclists, and drivers face in navigating downtown St. Paul.

The business owner survey will be distributed electronically via email to members of the St. Paul Chamber of Commerce, Visit St. Paul network, and to the St. Paul Downtown Alliance email list of business owners. The Downtown Alliance estimates that there are about 170 businesses in the downtown area. Given this number, we will need a sample size of about 120 respondents in order to ensure statistical significance. We intend to collect survey data over the course of two weeks, or until the desired response rate is reached. If the response rate is insufficient during the first week of the survey, we will send a reminder email to complete the survey.

The resident survey will be distributed electronically to members of the St. Paul Downtown Alliance email list as well as the CapitolRiver Council email list. Both groups will also post the survey on their Facebook pages in order to reach a wider audience of residents who may not subscribe directly to their email lists. There are about 10,000 residents living in downtown St. Paul, so the goal sample size is approximately 370 respondents in order to ensure 95% confidence in the survey responses (Melo, 2019). Similar to the business owner survey, we intend to collect data over the course of two weeks or until the desired response rate is reached. These questions, consisting of both open- and closed-ended questions, are informed by previous surveys administered to residents in towns intending to update their wayfinding system (“Wayfinding Questionnaire”, 2013; “Windsor Signage,” n.d.).

After the survey data has been collected, each evaluator will clean the data from one survey, eliminating duplicate responses, removing those who did not accurately complete the survey entirely, and ensuring that the business owner respondents have a business located within downtown St. Paul (Koundinya 2018). We will then use descriptive statistics to present common barriers and themes that we identified from each survey. These statistics will give the CRC a swath of quantitative data to potentially display the need for a zoning study.

One of the limitations of our survey method is the possible presence of response bias. An online survey sent via the Chamber of Commerce, Downtown Alliance, Visit St. Paul, and CRC will inherently miss the population that does not subscribe to these email lists, and business owners who are not members of the Chamber of Commerce or Visit St. Paul network will not necessarily receive the survey. Additionally, self-selection into taking surveys as well as the use of online surveys may lead to biased results because some people may not be comfortable with online survey

technology. However, through this data collection method, we will be able to identify initial barriers to the downtown St. Paul wayfinding system in a low-cost but highly-effective manner. We will also collect contact information at the end of the survey so that we can follow up with respondents for interviews if they provide information that we find could be useful to know more about. Interviewees will be selected randomly from the pool of respondents who either had a negative experience with the Zoning Board of Appeals or Heritage Preservation Committee or those who decided against putting up a sign altogether.

## *Interviews*

In order to gain a deeper understanding of the barriers to wayfinding for both residents and businesses, we are going to interview several respondents to the business survey in addition to city employees, if time permits. Because of the health and safety challenges present in today's pandemic, we will conduct online interviews via Zoom in order to keep the evaluation team and participants safe. For each subset of participants, interviewers will have a specific set of initial questions, found in Appendix B. However, by keeping the interview in a live format, the interviewer can ask for clarification and ask follow-up questions that are not available in the survey method (Lupton, 2020).

We will set up each interview by sending out a few blocks of time that both evaluators are available, and then allow the participants to select the time that is most convenient for them, allotting for approximately 15 minutes for the interviews. Interviews will be scheduled within a week of receiving the survey response so the business owner will be able to recall specific answers to the survey. These interviews will be informative in nature, and are intended to help the evaluation team understand the rules and regulations that may impede residents from successfully navigating in downtown St. Paul. We will ask for consent to record the interview so that other members of the project can see the data, while the exact words of interviewees can also be captured.

Each interview itself will begin with an introduction to the goals of this evaluation, leaving space for any initial questions that the interviewee might have. Then, we will ask the proscribed list of questions, in addition to any necessary follow-up questions. Once all questions have been worked through or the allotted time is getting close to end, we will allow space for anything else that the interviewee wants to discuss about the topic in general.

The purpose of both the business owner interviews is to triangulate the findings from the surveys and give the evaluation team a more nuanced understanding of the barriers to wayfinding in downtown St. Paul. The qualitative data collected from these surveys will complement the quantitative data the CRC can use to persuade the city to conduct a zoning study.

After all of the interviews are conducted, we will comb through the interview transcripts to highlight key themes and phrases present throughout the interview processes (Koundinya 2018). We will then use these common themes to confirm the findings from the survey, or to bolster the quantitative data with more concrete examples of the wayfinding barriers in downtown St. Paul.

While the interviews are a vital source of information in order to triangulate our data, there are limitations to interviewing business owners. Given that interviews are time-consuming, we will not be able to conduct an interview with every respondent, which ultimately may lead to biased results. We will mitigate this bias by selecting interviewees based on the selection criteria described above. Also, since conducting Zoom interviews will require us to collect email addresses of interviewees, potential interviewees that are unwilling to be identified from their emails but have valuable insights to share with us will be excluded from being interviewed because of the interview method, which causes selection bias. Despite these limitations, the interviews will provide us with a more in-depth understanding of the barriers to wayfinding and creating signage in downtown St. Paul that may ultimately help convince the city to conduct a zoning study.

### *Code Comparison*

While understanding the perspectives of businesses and pedestrians is important, we also recognize that analyzing the codes that bind these actors in a larger national context is equally important. Therefore, last semester the evaluation team built a data collection tool that measured the differences between Saint Paul's signage zoning code and the signage zoning codes of four similar Midwestern cities, based on population sizes, demographics, climate, downtown area, historic districting, and business population: Minneapolis, Madison, Cincinnati, and Saint Louis. The analysis was based on the fact that organizations often use external benchmarking in order to compare its own performance to the performance of other similar organizations (Poister, 2015). This benchmarking allowed for the CRC to see irregularities in the Saint Paul zoning that were not present in similar cities. Seeing as cities often look to similar cities in order to enact new policies and ordinances, this practice provided the CRC with evidence to persuade the legislature to rethink specific codes.

### *Literature Review*

Similar to the code comparison conducted last semester, we will also conduct a review of literature to determine the current best practices in wayfinding. We will search for wayfinding manuals and drafts of wayfinding plans across a variety of search engines and library resources. We will also read through the guiding practices of various wayfinding firms that are contracted out by cities to design and implement new wayfinding systems.

As we read through the literature, we will highlight themes and commonalities that arise across a variety of sources. After analyzing the survey and interview results, we will compare the current wayfinding practices and pitfalls in St. Paul to those best wayfinding practices that we compile. In doing so, we hope to highlight the areas in which St. Paul is not meeting current best practices. Since cities tend to look towards one another when implementing new policies or programs, this literature review will provide the CRC with a detailed list of the ways in which other cities are designing wayfinding systems that can act as a litmus test for St. Paul's own wayfinding system. If

the surveys and interviews point to specific areas in which St. Paul's wayfinding system is failing, this literature review can provide a positive example of what St. Paul's wayfinding system could and should be, thus providing more evidence for a zoning study.

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